The Harveian Oration

DELIVERED AT THE

ROYAL COLLEGE OF PHYSICIANS

On Tuesday, Oct. 18th, 1887,

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NOTHING would have better pleased me, Mr. President and brother Fellows, than to have revived the ancient and time-honoured custom of a Latin Oration, such as these walls have so often echoed to; and this the more gladly from my belief that the practice tended to maintain the dignity of our College and its reputation for learning. But there is a tide in popular opinion which seems just now to be setting somewhat strongly in a direction opposite to the older and traditional cultivation, and a prepossession abroad that a knowledge of the ancient tongues on which our English language is founded is incompatible with ability to search out the secrets of nature by way of experiment. A striking refutation of the fallacy exists in the very man whom and whose labours we are met here to-day to commemorate, and whose honoured name as written in Latin by his own hand should stand in the forefront of my discourse as it does on the title-page of the manuscript: GULIELMUS HARVEIUS. I say in his own hand for, thanks mainly to the energy and labours of Sir E. Sieveking, we have now before us a noble production of his manuscript lectures delivered in 1616; not merely the *autos eiren*, but the *autos egrapse*, the very autograph sign manual of a great mind, wherein we can read not only his verbal utterances, but can, with a little care at the same time, trace character, education, and temperament. It is just ten years since the gentleman named above announced to the College the rediscovery of the first Harveian Lectures, and now the autotype copy with its transcript is fully before us. My object therefore on the present occasion will be to endeavour briefly to comment on this most interesting and unique work, and to sketch the lineaments of Harvey, self-revealed, as a scholar, a lecturer, a physicist, and as a man of genius, not to say humorous, disposition. In so doing we may gather from the *ipsissima verba* of one who "being dead yet speaketh" two lessons which, I believe, have not occupied the attention of my many far abler predecessors in this chair. First, an instruction in the art and method of lecturing, and wherein in this age of printed books it may still be of service. Secondly, what a large field of discovery and research still lies open to us, as it did to Harvey, on the borderground between physics and physiological medicine. For this reason I have ventured to give my oration the title of Ἰατροφυσικα, just such a word as he would, I fancy, have delighted to jot down, possibly in red ink, with his cypher appended, in some corner of his manuscript notes. For the discovery which has rendered Harvey's name famous was strictly physical, I may even say mechanical. It had, moreover, the one great element of accuracy in applied mechanics: it was computational and quantitative.

There can be little doubt that general ideas were abroad on the subject of the circulation, and that similar views, not indeed incorrect, but loose and inaccurate, had been entertained by others. Even Cæsalpinus, *pace* Dr. George Johnson, undeniably had glimpses of the truth. It was, however, Harvey who first saw and proved that the problem was one of hydrostatics, and that it must be solved, and could be solved, by mechanics, and proved by numerical relations. There is a remarkable page in the Lectures, one of the best written and most legible in the book, in which this is stated with absolute clearness, and which at once disposes of any claims advanced in other quarters. It runs as follows: "Constat per fabricam cordis sanguinem per pulmones in Aortam perpetuo transferri, as by two clacks of a water bellows to rayse water. Constat per ligaturam transitum sanguinis ab arterijs ad venas, unde Δ perpetuum sanguinis motum in circulo fieri pulsu cordis." The two hydrostatic conditions of the circulation are herein defined with geometrical accuracy, and read like the enunciation of a theorem in Euclid. Indeed, it is remarkable what a strong mathematical element runs through the argument of both his great treatise and of the lectures; not of course mathematics as we now understand them, for at the date of Harvey's death Newton was a boy of fifteen, but those of Euclid and of Archimedes. In the second page of the MS. work he speaks of form "ut trigonis in tetragonum," of proportion "ut diapente in diapason," the relation of the triangle to the square, of the fifth in music to the octave. An even more remarkable reference to musical ratios occurs a few lines later, "ut semiditonos diapaso," like a semitone to an octave. Again in the ninth page we find "Proportio pectoris ad ventrem diapason ut 3·4 sesquitertia; pectoris ad caput $\frac{2}{3}$ diapente, pectoris ad alvum $\frac{1}{4}$ diapason; both these last two ratios being expressed as fractions. We have, moreover, direct personal evidence to his studies in this direction; for Aubrey found him reading Oughtred's "Clavis Mathematica," and working the problems when he was no longer a young man. Now his strongest and most irrefragable argument for the new view of the circulation is distinctly numerical. "Supponamus," he says, "quantum sanguinis sinister ventriculus in dilatatione quum repletus sit contineat, sive ℥ij; sive ℈jss; ego in mortuo reperi ultra ℥ij." And further on the problem thus concisely proposed is continued: "Ita in homine protrudi singulis cordis pulsibus, supponamus unciam semis, vel drachmas iij, vel drachmam unam sanguinis, qui propter impedimentum valvularum in cor remeare non potest. Cor unâ semihorâ plus quam mille pulsus facit. Jam multiplicatis drachmis videbis unâ semihorâ, aut millies drachmas tres, vel drachmas duas aut uncias quinquies centum, per cor in arterias transfusam, quæ major est copia quam in universo corpore contingat reperiri. Quare concludendum si unciam transmissam contingere, libras 83 et ℥iv in unâ semihorâ transfusas esse de venis in arterias." He saw distinctly that the heart was simply a double force-pump, propelling an incompressible fluid into an equally double system of tubes; that it was the sole efficient cause of the motion thus engendered (indeed he uses the phrase, "solum a corde"); that the lungs, although an air-pump of no inconsiderable power, both for compression and rarefaction, had nothing whatever to do with this; that the valves of the heart acted equally as machines to make good the dynamical advantage thus obtained, and that the quantity of fluid thus raised was incomparably greater than had been before supposed. The conception is as distinctly mechanical as that of the steam engine, or of the mechanical equivalent of heat which were to arise in later centuries. Even of this last great generalisation in mechanics he had no indistinct glimpse; for in the thirteenth page of the MS. he compares heat to a hammer. "Calor ut malleus instrumentum instrumentorum." With the working out of this complex but perfectly precise problem in hydrodynamics, came accuracy and certainty in place of theory and conjecture. "Flux and reflux" had had their day, and no more need be said of that unlucky Euripus which is fabled to have driven a great natural philosopher, Aristotle, to suicide, and which had been an incubus on science ever since.

Only twenty-six short years after the first Harveian lectures were committed to paper, and fourteen after the treatise "De Motu Sanguinis" appeared, the wondrous boy was born who was destined in like manner to penetrate another of nature's mechanical mysteries—the problem of universal gravitation. Newton was fifteen years old when Harvey died, and already studying Oughtred's "Clavis Mathematica," the very work which Aubrey found Harvey engaged upon, as above stated. As regards Harvey's classical scholarship, little needs to be added to what has already been well said. The scholar of Canterbury Grammar School and the pensioner of Caius College, Cambridge, was clearly well trained in classics, dialectics, and physics. He evidently knew Aristotle thoroughly, and often quotes him, especially the grand treatise on "Metaphysics" and the excellent book on the "Generation of Animals," a quotation from which stands on the title sheet of the Lectures. For it must be remembered, in these days of detraction, that Aristotle was no mean naturalist, and even comparative anatomist; many of his shrewd observations in this direction being sound even to the present time. "Naturæ diligentissimus investigator" are the words. Harvey also quotes the "Gorgias" of Plato, and there is a passage in the preface to his treatise "De Generatione" which so com-

pletely recalls the myth of the cave in Plato's "Republic" that it cannot be an accidental coincidence. "Hi," says he, "non veras ideas, sed falsa idola et phantasmata inania mente concipiunt; unde umbras quasdem et chimæras sibifingunt." It is difficult also to believe that this metaphor had not been recalled to Harvey's memory by the use of it under the name of Eidola Specus, in a great work then recently produced, which overtly in its very title professed to be an extension of Aristotle's grand work on formal logic—namely, the "Novum Organon" of Bacon.

Aubrey says, in his "Lives of Eminent Persons," that Harvey understood Greek and Latin pretty well, but was no critic, and wrote very bad Latin. We are, however, now in a position to judge of this for ourselves from the real autograph. The Greek words scattered freely through the lectures are well written and spelt, though in one or more instances the first part of a word begins in Greek and finishes in English characters. But this is only on a par with the whole work, which is a canto of Greek, Latin, and English, never intended to be seen by any eye besides that of the writer himself. Yet even thus in passages they rise almost to eloquence, as in p. 47, where, speaking of the maintenance of human species by generation, in spite of the death of the individual, he says: "By the string tyed to eternity. Unde cum naturâ non potuit Individualem æternitatem, id quod potuit harum partium facultate speciem æternitatis generando sibi similem in secula. Unde sacris literis greatest blessing Issue, that thy seed shall remayne for ever." And further on: "Apparet item maribus et fœminis qui moderate utuntur never more brave, sprightly, blith, valiant, pleasant, or bewtifull," which cannot fail to remind us of the passage in the fourth Georgic of his favourite author Virgil:

> "Ergo ipsas quamvis angusti terminus ævi
> Excipiat (neque enim plus septima ducitur ætas)
> At genus immortale manet, multosque per annos
> Stat fortuna domûs, et avi numerantur avorum."

But before leaving the loving commemoration of our great benefactor, I wish to point out some evidences of his genial and even humorous temper, which must have made the lectures pleasant to listen to. At page 16, speaking of the position of the abdominal organs, he says: "Situs omnium partium certus partim incertus." Then, breaking into familiar English, he notes: "Natura Romidges (*sic*) as she can best stow, as in ships." While still on the same topic, he points out that malposition of organs occurs in "yeoung (*sic*) girls by lacing; unde cutt there laces." In another place (page 53), in describing an irreducible hernia, he says it may be filled "cum maximâ quantitate aquæ et flatus." "The man behind Covent Garden bil." At page 35 the spleen is described in man "as washous to the kitchin," and its absence in lower organisms, "Inferior kitchins need noe washhous." Lastly, "in quibus vitiatum temperamentum, Lien Major the washhous exceed ye kitchin." It is difficult to believe that the passage which follows (page 54), "Mas a vigore spiritus higher sett, unde Bastards brave men, quia magno fervore geniti vetito concubitu" is not a reflection of Shakspeare's bastard, Faulconbridge, a character which Harvey may have seen represented, even by its creator himself, at any time in the eighteen previous years. But perhaps the quaintest entry is one speaking of some rather controvertible anatomical assertions which he thus records (page 50): "W. H., a little staggerum in these." He describes the thymus gland as follows: "Thimus, sweete bread, nutt of veale, corpus glandosum molle, beare they sticke the piggg." And a little further on, speaking of some idle controversy of previous writers, he describes it "est de lanâ caprinâ," which is obviously a note jotted down from the Horatian line, "Alter rixatur de lanâ sæpe caprinâ." In an excellent account of the signs of asphyxia, he says: "Soe curst children by eager crying grow black and suffocated, non deficiente animali facultate," which again recalls to our memory Kate the Curst in the "Taming of the Shrew."

There is, however, one page of this remarkable volume which requires more than cursory notice, as beyond illustrating the character of our distinguished benefactor, which I am specially directed to do, it affords us from his example a valuable lesson for our own instruction. These are the *canones anatomiæ generalis*, rules which he evidently laid down to himself, and in which he has left us a precious legacy of advice. They are twelve in number, hastily, but evidently after mature thought, jotted down in the strange mixture of Latin and English which is throughout the book adopted. They occur at page 4:—

"Canones Anatomiæ generalis

1 shew as much vno intuitu as can be
vt de toto ventre: vel toto aliquo quæ accidunt
deinde dividere (propter situs et conexiones
2 demonstrare propria illius Cadaveris
Nova vel Noviter inventa
3 to supplye only by speech what cannot be shewn
on your own credit and by authority
4 cutt vp as much as may be in presentia ut cum
Historia peritia innotescat
5 observationes proprias et alienas recensere
ad confirmandam propriam opinionem vel obsignatis
tabulis in alijs Animalibus agere
secundum Socratis regulam: where it is farer written
vnde observationes exoticas
1 ob causas Morborum: Medicis præcipue vtillissimas
2 ob varietatem Naturæ philosophicæ
3 ad refutandos errores et proinde solvendos
4 ob vsus et actiones Inveniendas dignitates
et propter inde Colectanea
Anatomiæ enim finis partis Cognitio propter quid
Necessitas et vsus
philosophis præcipue qui inde sciunt
ad vnamquamque actiones quæ requiruntur quod præstat
Medicis item qui inde constitutionem naturalem
regula quo diducendi ægrotantes
et inde quid agendum morbis
6 Not to prayse or disprayse. all did well
and behowlding ijs qui perperam quia occasio
7 Not to dispute confute alias quam argumentis
ostensis quia plus quam iij dies requiruntur
8 Bredly and playnly: yett not letting
pas any one thing vnspoken of which
is subiect to the vew
10 Not to speake anything which with outt the carcase
may be delivered or read att home
11 Non nimium curiose pertinet enim particularibus
dissectionibus et tempus non patitur
12 to serve in their iij courses according to the glass
1° ventris inferni nasty yett recompensed by 'admiry'
admirable variety
2° the parlor 3° divine Banquet of the brayns."

It is singular how much of this is still valuable, though written at a time when printed books were scarce, oral lectures the chief mode of teaching, and primers, text-books, compendia, with all the artillery of cram, unknown. Indeed, a direct answer is given to the paradox, which has of late obtained some vogue, and which has been fostered by examining machines miscalled universities, that lectures are useless, and that it is only necessary to ascertain that a student knows certain prescribed facts without asking how and where he learned them. Those of us who are teachers and examiners—and I am aware I am speaking before the most learned body of teachers and examiners in this kingdom—know the fallacy; it is a fallacy, moreover, chiefly in the higher branches of thought, where absolute certainty is unobtainable, and where tact, experience, and the exercise of a judicial function of the mind are necessary. It is a fallacy still more where acutely cultivated sense—the memory of the eye, of the ear, and of the touch—have to be added to these characters. As an examiner myself to this College of over seven years' standing, I feel I can often detect book knowledge and parrot-like iteration of catch-words learned by rote, but not thought out, in some voluble but superficial candidate. Indeed, Charles Dickens and Albert Smith (the latter a medical student himself, both acute observers of human nature) have each pilloried flagrant offenders in this direction with the severity and incisiveness of real humour. To these book-read anatomists and school-board paradoxists an admirable answer is given in the words, "Cutt up as much as may be in præsentiâ, ut cum Historiâ peritia innotescat," that, with the description, practical experience should arise.

But it is not only the superficial and sciolistic learner who may gather lessons from this remarkable page; there is much that we as lecturers and teachers may take to heart with advantage. "To supplye only by speech what cannot be shown on your own credit and by authority"; also, "observationes proprias et alienas recensere, ad confirmandam propriam opinionem." There is often, even at the present day, much difficulty in the full performance of the duty here so lucidly and tersely set forth—that, namely, of comparing our own with others' observations. It occurs to a great extent in the department to which the present speaker's chief attention has been devoted—that, namely, of physics. Much valuable work and information is stored away in papers read before learned societies, in small detached pamphlets, in foreign and scientific periodicals, and similar places very hard to reach for purposes of consultation. Hence follows no little repetition of labour in rediscovery,

and the consequent disappointment of perfectly conscientious observers who have unwittingly gone over the same ground as their forerunners in science. It is, moreover, from comparison of one's own views with those of previous labourers, if it be performed in a conscientious and thorough manner, that new views and ideas often arise.

It is not, however, so much in the seeking out of new facts in nature that these *canones* help us, as in the suggestions for the communication of knowledge, a function especially important in the art of medicine, because at the end of our educational chain there hangs suspended a human life. There can be no hesitation in calling this pregnant collection of maxims a treatise on the art of imparting knowledge, an art too much neglected even in the present age. For, sooth to say, Englishmen fall, I fear, somewhat behind their French and German rivals in the practice of this important function. Even their speech and articulation are often inferior, as anyone who has listened to Trousseau, Claude Bernard, or Virchow must be well aware. "Breefly and playnly, yett not letting pas any one thing unspoken of which is subject to the vew," says our thoughtful monitor. Then again, "Not to dispute confute alias quam argumentis," a quiet sarcasm on obtrusive controversialism which may go home to many a pulpit beyond this from which I have the honour to address you.

We are now in a position to gather in the fruit of our author's teaching; and first as to the utility of lecturing. We have it in his quaint language that it is justly a combination of what a book can give—namely, knowledge; with what it cannot—namely, *intuitus* or demonstration. In many subjects, in none certainly more than general anatomy, this is a point of no mean importance. The eye can assist the ear; two inlets are afforded at once to the sentient brain instead of one, and two forms of memory can be called forth. For it is a fact, though one seldom insisted on, that memory has at least as many forms as there are senses. The memory of the ear is perhaps the commonest but also the least intellectual, unless applied to harmonious sounds and melodies. Unfortunately, the mere reproduction of the dry husks of thought termed words is too much cultivated in these days of overpressure, and too little care is taken to secure the essential nucleus of the grain of thought. To the anatomist, the surgeon, and the man of science generally, the memory of the eye transcends the former. A geometrical memory, which can reproduce forms healthy or diseased, is an acquirement especially to be cultivated by the student of medicine and pathology. This is far better done in lectures than by books.

Secondly, the lecturer can keep himself abreast of all things *nova vel noviter inventa*, whereas the book, even if at first up to date, as it seldom is, soon falls back in the race and becomes ancient. There are, indeed, books, like the "Metaphysics" of Aristotle, the "Republic" of Plato, and the "Aphorisms" of Hippocrates, and more lately the "Principia" of Newton, the "Religio Medici" of Sir Thomas Browne, and the work "De Sedibus et Causis Morborum" by Morgagni, which will never grow old; but when we come to the new philosophy, and wrest daily fresh secrets from nature, the case is different. Here also the lecture far transcends the book; especially if the lecturer, standing on the brink of the precipice which separates the known from the unknown, can detail facts or deductions which he can vouch for and prove "on his own credit and authority," as saith our teacher. It is a severe labour, indeed, but a labour of love in these days of scientific progress, to keep oneself informed of all fresh truths as they arise, so as to impart them "breefly and playnly" to younger and still thirsty minds. If to these he can add *observationes propriæ*, original facts and investigations, the lecture reaches a pitch of individual interest which none but the greatest books, certainly no handbooks or manuals, can ever attain.

Lastly, the lecture, well delivered, has a greater point and flexibility than the written volume. The lecturer, like the actor, can study his audience, and wake their attention by a judicious or even humorous allusion. The manuscript before us teems with these; indeed, several have been already cited; perhaps, however, the quaintest of all occurs in the description of the diaphragm. After giving its function as a septum or partition, he mentions the old English name *midrefe*, and this he compares to the *shere* or *shire reeve* or *reeve*, a well-known county officer at the time, and says, "his office serving to both belly and lungs he is stickler between them." There can be but little doubt that a smile passed over the grave countenances of the assembled physicians at this homely allusion.

Thus did the first Harveian lecturer, as we see from the veriest *editio princeps* possible of the first lectures, fulfil the precept to "make these dry bones live," to give the vivifying force of character, fancy, and originality to the general facts of anatomy. Since then two hundred and seventy-one years have run their course, and still the sacred fire of thought and genius burns in them undimmed by time.

There yet remains one part, perhaps the most important, of my prescribed task to be performed, and that is to draw a practical conclusion from the essentially physical and mechanical character of Harvey's great discovery. That he himself fully knew this has been already shown in his own words; it is also by his division of anatomy into three parts—philosophica, medica, and mechanica. Now at the present time investigation and research is abundantly carried on in the pathological, physiological, and therapeutical aspects of medicine, but the physical or mechanical side is somewhat neglected. For hundreds of ardent questioners of nature who are labouring with the microscope in the biological and bacteriological laboratories, those who attack medicine from its physical side may be counted on the fingers of one hand. Nor, indeed, are the written treatises on this subject abundant, in this country at least. The "Animal Mechanics," of the Rev. Dr. Haughton, of Trinity College, Dublin, is an exceptional work of great value, which has hardly received the attention it deserves from the medical profession, but it stands almost alone as the representative of its class. On the Continent, however, and in America the case is very different. The admirable "Medical Physics" of Professor Wundt, of Heidelberg, has been translated from the German into French, with valuable additions by Dr. Ferdinand Monayer, who regularly lectures on medical physics at the Lyons Faculty of Medicine, and affords a storehouse of information of the highest value to the medical practitioner. Dr. John C. Draper, Professor of Chemistry and Physics in the Medical Department of the University of New York, has also made a valuable contribution to the literature of this subject in his text-book of "Medical Physics," published the year before last. There is, indeed, a small but scanty manual by Dr. McGregor Robertson, the Muirhead Demonstrator of Physiology in the University of Glasgow, published in Cassell's Student's Series, but it is entirely unfit to compete with the two exhaustive treatises named before.

As with the bibliography, so with the teaching. With the exception of a course of lectures which the present speaker has delivered since 1871 in St. Thomas's Hospital, I am not aware of any systematic attempt in London to teach the medical student the vast mass of physical facts which underlie the daily practice of medicine. This College, however, forms an honourable exception, for it has on two occasions kindly given me the opportunity to bring before my brother physicians some few of what our Harvey terms *nova vel noviter inventa* respecting the physical basis of auscultation in the Croonian, and the electrical conditions of the human body in the Lumleian, lectures of a few years back. It is true that the University of London in its Preliminary Scientific Examination for the degree of Bachelor of Medicine requires students to satisfy their examiners in physics by means of a written paper. But this paper is the same as that set to Bachelors of Science not medical. It is a terrible stumblingblock to the rising medical generation; it bristles with what the late genial Professor De Morgan, himself a mathematician of the highest order, delighted to call mathematical conundrums. It is set by pure physicists, who know nothing, and probably care little, for the problems which interest us as medical men. It contributes a large percentage to the slaughter of innocent aspirants to the higher degrees in medicine, on which one of their most distinguished graduates, now Censor of this College, has feelingly and righteously commented. In the sixteen years during which I have carefully read the papers there set, I have never once seen a question directly or indirectly bearing on the physics of medicine. The fact is that the large, difficult, and somewhat heterogeneous branch of knowledge connoted by the word "physics" is rapidly splitting into several independent portions. There are now distinctly molecular, mathematical, industrial, and physiological physics. It is the last of these with which we are concerned. The third or industrial branch has been enormously developed of late by the technical colleges at Bristol, Manchester, the City guilds, at Kensington, and elsewhere.

The mathematical branch is well cared for by the two old Universities of Oxford and Cambridge; but the physiological section has been hitherto hardly enough recognised by our teaching bodies. Surely an earnest student should be able somewhere to obtain information as to the natural laws on which the stethoscope, the microscope, the ophthalmoscope and the sphygmograph are founded, without having to wade through interminable problems on the C. G. S. system of units, or vortex theories of matter, or, chimera of chimeras, the possibility and advantages of four-dimensional space.

It is to the promotion of this particular branch of study by means of experiment that it is this day my duty to exhort the College. An admirable opportunity exists, for in April of the present year the Committee of Delegates appointed by this College and the Royal College of Surgeons of England reported—"1. That it is desirable to utilise the vacant ground adjoining the Examination Hall for scientific purposes under the control and management of the two Colleges. 2. That the 'scientific purposes' be, in the first place, the investigation and exposition of such branches of science connected with medicine and surgery as the two Colleges may from time to time determine." The College has subsequently adopted the report.

Now I submit with the utmost respect, but with the greatest earnestness, to those here assembled that a course of physiological physics to be delivered in the new College of Science would be a real boon to all students of medicine, whether they had succeeded in obtaining their diploma or not. The human body is a mass or congeries of separate machines, susceptible of mechanical explanation; but, setting aside the heart and lungs already named, how many students have their attention specially drawn to Donders' and Landolt's optical researches on the eye and eyesight, or to Helmholtz's account of the mechanism of the ear? Such a course, moreover, would in no way clash with other courses given elsewhere on different branches of the same great subject, and it would eminently fulfil the exact purpose even to the very words of the great man whom we are to-day met to commemorate.

Remarks
ON THE
PSYCHOLOGY OF JOKING,

Delivered at the Medical Society of London, October 17th, 1887.

BY J. HUGHLINGS JACKSON, M.D., F.R.S.,
PRESIDENT OF THE SOCIETY.

AFTER some introductory remarks, Dr. Hughlings Jackson said:—

I think punning does not receive enough attention. In spite of Dr. Johnson's well-known dictum, we should not despise punning. Sydney Smith says that it is the foundation of all wit. Supposing three degrees of evolution, I submit that punning is the least evolved system of joking, that wit is evolved out of punning, and that humour is evolved out of wit. Everybody has heard of Sydney Smith's remark—that it requires a surgical-operation to get a joke into the head of a Scotchman. But he spoke without distinguishing. The Scotch have a great appreciation of those highly evolved jocosities displaying the humorous, although, no doubt, a scorn of simple, lowly evolved jocosities, such as plays on words. It is difficult to form a conception of a Scotch punster. Yet I have heard an Aberdonian, a physician of world-wide reputation, make a pun.

Punning is well worthy of the psychologist's attention. I seriously mean that the analysis of puns is a simple way of beginning the methodical analysis of the process of normal and abnormal mentation. This, I think, I can easily show. Vision is stereoscopic; in a sense it is slightly diplopic, for there are two dissimilar images, although there seems to be but one external object, as we call it. To borrow the ophthalmological term, we can say that mentation is "stereoscopic"; always subject-object, although we often speak of it as single ("states of consciousness," &c.). Just as there is visual diplopia, so there is "mental diplopia," or, as it is commonly called, "double consciousness." Now I come back to punning. We all have "mental diplopia" when hearing the answer to a riddle which depends on a pun:—"When is a little girl not a little girl?" Answer: "When she is a little horse (hoarse)." The feeble amusement we have in the slightly morbid mental state thus induced is from the incongruous elements of a "mental diplopia." The word "hoarse" rouses in us the idea of a little girl who has taken cold, and the same-sounding word "horse" rouses in us the idea of a well-known quadruped at the same time. We have the sensation of complete resemblance with the sense of vast difference. Here is, I submit, a caricature of the normal process of all mentation. The process of all thought is "stereoscopic" or "diplopic," being the tracing of relations of likeness and unlikeness.

To call punning a slightly morbid mental state may be taken as a small joke, but I do not think it very extravagant to describe it so; it certainly is not if it be a caricature of normal mentation. A miser has been defined as an amateur pauper; the habitual drunkard is certainly an amateur lunatic; and in the same style of speaking we may say that—well, we will say that punning is playing at being foolish; it is only morbid in that slender sense. The word "play" carries us forward in a slightly different direction. Jocosities of all degrees of evolution—(1) puns, (2) witticisms, and (3) humorous statements—are the "play of mind"; play in the sense in which the word has been used in the remark that the "æsthetic sentiments originate from the play impulse." A further definition of play as thus used is given in the following quotation from Spencer:—"The activities we call play are united with æsthetic activities by the trait that neither subserve, in any direct way, the processes conducive to life."[1] There would be a great intellectual advance—due, I presume, to internal evolution—when man began to value things for their beauty apart from their use, one sign of his having "got above" his mere animal self. For it showed that, over and above mind required for mere animal existence, he had some surplus mind for greater ends of life. So I contend that our race owes some respect to the first punster. For the dawn of a sense of the merely ridiculous, as in punning and the simplest jokes, shows the same thing as the dawn of æsthetic feeling—surplus mind, something over and above that required for getting food and for mere animal indulgence. All the more so if punning be that out of which wit and humour are evolved. It is not a good sign if a man be deficient in humour, unless he have compensation, as Wordsworth had, in a sense of the sublime, or in great artistic feeling, or in metaphysical subtlety. The man who has no sense of humour, who takes things to be literally as distinct as they superficially appear, does not see fundamental similarities in the midst of great superficial differences, overlooks the transitions between great contrasts. I do not mean *because* he has no sense of humour, but because he has not the surplus intellect which sense of humour implies. Humour, being the "play" of mind, is tracing deep, fanciful resemblances in things known to be very different. This is "playing" at generalisation, and is only a caricature of the same kind of process which made Goethe declare that a skull is a modified part of a vertebral column.

Now I am about—not really digressing from what I have just said—to say something which sounds very paradoxical: that persons who are deficient in appreciation of jocosities in their degrees of evolution, are in corresponding degrees deficiently realistic in their scientific conceptions. One would infer this *a priori*. Every child knows that a man born blind has no idea of light, but the educated adult knows, too, that the congenitally blind have no notion of darkness. And I think that observation confirms what *a priori* seems likely—that *pari passu* with the evolution of the sentiment of jocosity (playing at unreality) is the evolution of power of realistic scientific conception—from sense of the merely ridiculous with parallel realistic conception of simple things, up to sense of humour with parallel realistic conception of complex things. But we must be on our guard not to take commonplace realism about simple things to be realism when applied to very complex things. It seems at first glance more realistic to suppose that sourness is inherent in vinegar than that it is always a sensation in some percipient. But that the former hypothesis is very unrealistic is easily seen when we put such

[1] Prin. Psych., vol. ii., p. 627.

crude metaphysics in other words; the doctrine then is that part of the taster's own mind is outside himself. It is possible for the same person to be truly realistic in simple things, and to be intensely unrealistic in complex things. Thus, the really practical man, who may tell us that he despises metaphysics, may be crudely metaphysical when he deals with complex things—"explaining," for example, that a man comatose does not move because he has lost consciousness. Surely the truly realistic conception is that the comatose patient does not move any of his limbs from some physical disability—for essentially the same reason that a hemiplegic man does not move his arm and leg.

I now go back to my small joke that punning is a slightly morbid mental state, a "mental diplopia," a caricature of the normal "diplopia" of healthy mentation. From this point I make the assertion that the "physiological insanity" of dreaming is diplopic—a caricature of that of waking mentation. A physician reads in the day of the strained relations of European States; in his dream at night he is called in consultation by Bismarck, and advises a course of the iodide of potassium (directions for the application of the remedy were not given). Clearly, there are here two very dissimilar mental states "pretending" to be stereoscopic; manifestly a seeming fusion of ideas of prescribing for a patient with ideas of the attitude of European States. I hope some time to be able to show that such diplopia has the same kind of mechanism as that of the pun—that the two elaborate dissimilar states are held together by two same, or similar, simple mental states. I go on to remark that in some people there are beliefs as incongruously diplopic as some states in dreams—diplopic in that way to other people, at any rate:—(1) Killing a rabid dog to prevent people already bitten by it going mad. (2) Imagining it to be possible to study what are called "diseases of the mind" methodically without distinguishing between the physical and the psychical. (3) A cleanly mother, from maternal solicitude, refraining from washing the top of her baby's head, lest it should come to have "water on the brain." (4) Imagining it to be possible to investigate complex subjects without the use of hypotheses; for instance, that Harvey could have made observations and experiments to *prove* the circulation of the blood without *supposing* beforehand that it did circulate. (5) Anointing a blade with healing salve to cure a wound inflicted by the blade.

Once more I go back to punning for a new start, trying to show again by very simple cases that punning is only a caricature of, and therefore for the psychologist a valuable experiment on, the process of normal mentation. I take first a case which is almost if not quite a pun, but one made unwittingly. What is called the inelegance of using the same word in one sentence, or in two consecutive sentences, causes mental diplopia. For even if each of the two words has the same dictionary meaning, we must bear in mind that a word loses something of that kind of meaning when forming part of a proposition, losing and taking meaning by and from its context. Hence the second time the word comes there is a faint revival of the ideas it symbolised when used the first time, along with a vivid revival of other ideas it now symbolises; there is trivial confusion from slight mental diplopia, like that from an ill-understood pun. I now give a more striking example—one in which there is manifest diplopia without confusion.

A smell, say of roses, I now have makes me think of a room where I passed much of my time when a child. Here clearly is "mental diplopia," and the mechanism of it is quite similar to that of the pun, making allowance for caricature in the latter. For the true process is that the smell of roses, now having, develops what we call the same smell, but really another smell, that of roses once had, in the old room. The two scents, linked together, hold together two dissimilar mental states (1) present, now narrowed, surroundings, and (2) certain vague quasi-former surroundings. When the scent of hay, or the caw of rooks, rouses in us vague pleasurable feelings, the mechanism is of the same kind, but the process is more complex. To further insist on the fact that mentation is stereoscopic, with more or less manifest diplopia, I give an example of mentation which is exceedingly common. Whilst writing I suddenly think of York Minster. Here is manifest mental diplopia (1) narrowed consciousness of my present surroundings, with (2) cropping-up of consciousness of some quasi-former surroundings. Of course something, whether I can mentally seize it or not, in my present surroundings has developed a similar something associated with York surroundings.

Recapitulating, I say that the process of all thought is double, in degrees from a stereoscopic unity of subject and object to manifest diplopia (two objective states for one subject). The process of all thought is tracing relations of resemblance and difference, from simplest perception—to say what a thing is, is to say what it is like and unlike—up to most complex abstract reasoning. The formula of the caricature of the normal process of thought is the "pretence" of some resemblance between things vastly different,—from punning, where the pretended resemblances and real differences are of a simple order, up to humour, where both are highly compound. We have the "play" of mind in three degrees of evolution, three stages of increasingly complex incongruousnesses.

If I had time, I could, I think, show that this address on jokes is not itself merely one big poor joke, but that what has been said applies closely to the study of "mental symptoms" in serious diseases. I should begin the new stage of the inquiry with the quasi-healthy feeling of "reminiscence," clearly an element in a mental diplopia. For my task would be an endeavour to show that all morbid mental states are departures from normal (stereoscopic) mental states in particular ways—that, for example, the process of mentation in the maniac is but a caricature of stereoscopic and diplopic mentation in healthy people. Thus, the reminiscence, although it is almost pedantic to call it morbid, is really a link between perfectly normal and decidedly abnormal mentation. For reminiscence occurs in slight attacks of a certain variety of epilepsy, as do other voluminous mental states ("intellectual aurae"): I call them all "dreamy states." These cases I should take next. There is clearly in them morbid mental diplopia, and yet this is traceably only a gross caricature of normal mental diplopia, being linked on to it by the reminiscence occurring in people we call healthy. And I think we may show that it has the same mechanism that puns have. Next taking these miniature and transient cases of insanity, and other cases commonly called insanity, I should try to show that the comparison of mentation with vision is of direct value. In the symptomatology of a patient who has paralysis of an ocular muscle there are many elements. There is morbid visual diplopia; in insanity there is morbid mental diplopia. The ophthalmologist's "true" and "false" images have their analogues in the "true" and "false" mental states in the cases of epilepsy mentioned. In the former, when the divergence of the eyes is slight, there is more visual confusion; in the latter, when the dissolution of the highest centres is shallow, there is more mental confusion. In the former, when the divergence is great, diplopia ceases (the patient, the ophthalmologist says, "neglects" the false image); in cases of epilepsy, upon deeper dissolution than that with which there is the "dreamy state," the actions are considerably coherent. The "erroneous projections" of the former have their clear analogues in the hallucinations of many cases of insanity. Believing that all diseases are to be looked on as flaws in different parts of one evolutionary system, I urge the "Comparative Study of Diseases of the Nervous System." I submit that, recognising the enormous difference between insanity and ocular paralysis, a profitable comparison and contrast may, nevertheless, be made, which will further a better knowledge of both. I do not mean simply that ocular paralysis may be taken as an illustration to simplify explanation of a case of insanity, but also that, both being examples of dissolution, the very same principles are displayed in each.

PARALYSIS OF THE ABDUCTORS OF THE VOCAL BANDS.

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History.—The theoretical conception of this disease, as far as literary records go, is first due to Galen,[1] who states that "if the muscles which open or shut the glottis are rendered immobile," both voice and respiration will suffer in proportion to the extent of the lesion. But his notions, based on no precise observation, are of the vaguest kind, the more especially as he considered that the inter-arytenoid and thyro-arytenoid muscles alone had the power of closing the glottis, all the others being in his view dilators. Hence

[1] De Locis Affectis, lib. iv., c. 6.

he would have connected the semeiology of this malady with paralysis of the lateral crico-arytenoid and crico-thyroid muscles, as well as with that of the posterior crico-arytenoids. Nevertheless, Galen was so much in advance of his own age and that which succeeded him that more than fifteen centuries elapsed before a pathologist arose to extend his conception, or even to appreciate its suggestiveness. About 1829 Albers[2] of Leipzig noticed cases of impeded respiration, which he called "laryngoplegia," and was inclined to set down to "paralysis of isolated muscles, especially the musculi dilatores glottidis." Such instances he conceived would arise in œdema of the glottis and croup (being then the chief cause of dyspnœa); also when tumours, such as aneurysm of the arch of the aorta, enlarged glands, &c., are so disposed as to press on the recurrent nerve; and, further, in case of ulceration or caries causing the muscles and cartilages to become separated. Before the introduction of the laryngoscope, however, this disease was of too recondite a nature to be recognised practically in clinical medicine. The first pathologist who gave it a really definite place in nosology was Gerhardt[3] of Jena, who about 1863 observed cases visually, and wrote an accurate description of the affection. "Should the posterior crico-arytenoid muscles on both sides," says he, "be alone affected, the strong contraction of their antagonists produces a glottis-narrowing continually progressive almost to closure. The inspiratory breath stream urges the vocal bands so near together that at the edges of the narrow chink remaining a loud friction sound exists (audible respiration). The voice is unaltered, whilst in recurrent paralysis it is essentially changed."[4] In these few sentences we have a picture of the disease almost clinically complete, and this short description was further elucidated by Gerhardt by remarks on the etiological and other collateral questions. In 1868 Mackenzie made this paralysis familiar to practitioners in this country by his essay on "Hoarseness and Loss of Voice," which exhibited for the first time a full view of laryngeal paralyses under an intelligible nomenclature. Finally, we may refer to Riegel's[5] extensive monograph on "Respiratory Paralysis," as marking the closing stage in the history of the malady, and bringing us up to the threshold of contemporary work in laryngology.

Semeiology.—Paralysis of the posterior crico-arytenoid muscles may be unilateral or bilateral. It is only in the latter case that the chief phenomena of the affection are developed.

Subjectively, as regards the larynx the leading symptoms relate to (*a*) respiration, but the (*b*) vocal condition also demands consideration.

a. In bilateral cases, the earliest—we may say, in fact, the only—trouble complained of is shortness of breath. The patient is always well aware from his own sensations that the obstacle to free breathing resides in the larynx. Thus he never, in uncomplicated cases, refers the obstruction to the chest, as happens in cardiac or pulmonary disease. This dyspnœa, as seen clinically, is usually progressive, and in the beginning, no doubt, as a rule, is almost imperceptible to the sufferer. In many instances, however, it halts at a certain point, and the patient may be but slightly incommoded, unless when muscular effort creates a demand for increased respiratory activity. In unilateral cases there is little or no interference with respiration, as the sound muscle by super-contraction can dilate the glottis sufficiently for all normal purposes.

b. With respect to voice, it is almost an antithetical distinction between bilateral and unilateral examples that the latter class present a vocal as exclusively as the former a respiratory obstacle. But the parallelism goes but a little way, because the vocal affection never attains any magnitude, whilst the dyspnœa may progress to a fatal result. Hoarseness, more or less decided, marks the unilateral paralysis; but the bilateral form, unless accompanied by a catarrh of the larynx, as not seldom happens, is free from this symptom. We have, of course, the phenomenon inseparable from all cases of respiratory derangement—viz., the impossibility of uttering a whole sentence in one breath, whence speech has a fragmentary broken character, with an inspiratory interval between every two or three words of each phrase spoken. In addition, however, persons affected by this paralysis speak so that the words have a peculiar short sharp ring, appearing to indicate that the vocal bands can only be held together firmly and steadily when assisted by the impulse of first approximation, although there may be no obvious affection of the adductors. No person in whom the malady is well developed can utter even a few words in a full and firm vocal tone. Hence, the bald statement usually found in text-books, that in the bilateral paralysis the voice is unaffected, appears to me to require a good deal of modification, and I consider there is a vocal characteristic that may often be recognised by the educated ear without further investigation as almost pathognomonic of this disease.

Objectively we have but one laryngoscopic sign proper to paralysis of the abductors of the vocal bands—namely, narrowing of the rima glottidis in its transverse diameter. This stenosis being brought about, as it is, by two distinct causes, also occurs in two different directions—namely, in lateral relationship, which is primary; and with respect to the linear centre of the glottis, which is secondary. At the earliest period of the malady in its bilateral form, before the development of any subjective phenomena, visual inspection could only notice that on full inspiration the glottis does not open to its widest extent, as happens in the normal condition; and during this act, when the paralysis has attained precisely its full development, the vocal bands cannot be drawn apart beyond the place they occupy when all the laryngeal muscles are at rest,—that is, the "cadaveric position," as Ziemssen calls the arrangement of the vocal bands as seen in the dead subject. But the narrowing, of course, does not necessarily stop here, for, in analogy with palsy in other parts, contraction of the unopposed adductors is likely to draw the vocal bands nearer and nearer, till, despite all efforts of the patient, the width of the glottis-slit is insufficient for the vital needs of expiration. Sonorous inspiration, often extremely loud during sleep, generally accompanies this stage. These results, however, are by no means constant, and many cases of much lower grade are lost sight of by the practitioner after having remained for many months in an apparently permanent unprogressive state. Thus the laryngoscopic picture is the exact complement of the subjective dyspnœa, and suggests nothing relative to vocal disturbance. In the unilateral paralysis the appearances, as confined to one side, are the same; and the glottis, especially during inspiration, is asymmetrical. We may also be able to observe that the affected vocal band is on a different level from that of the sound one, slanting from before backwards and downwards. The maximum of depression—which, however, is not likely to attain to 0·01 in.—is in the vicinity of the vocal process. The hoarseness, of course, directly arises from, and is proportionate to, this abnormality.

Pathogenesis.—In a majority of cases the exoteric etiology of this paralysis is very obscure. In some instances it undoubtedly originates in cold, especially when a subacute affection of a rheumatic character is produced in the cervical region.[6] It is also seen occasionally as the sequel of an acute attack of laryngitis, usually of a comparatively mild form.[7] Beyond these associations, clinical observation may recognise tumours disposed so as to press on the vagus or recurrent nerves, or evidences of brain disease, in which cases the paralysis is not likely to be pure, but will be more or less obviously complicated with other defects of motion or sensation in the larynx or elsewhere. Hence the pathogenesis of this malady is spread over a wide field, which can only be appropriately explored in the physiological laboratory or the post-mortem room, involving questions more proper for discussion in the next section. Mackenzie[8] thinks that

[2] Die Pathologie und Therapie der Kehlkopfkrankheiten. Leipzig, 1829.

[3] Studien und Beobachtungen über Stimmbandlähmung. Virchow's Archiv, Berlin, 1863, Bd. xxvii.

[4] This last statement, as we shall see later on, is only partially correct.

[5] Volkmann's Sammlung Klinische Vorträge, No. 95. Leipzig, 1876.

[6] A healthy young man, aged twenty-seven, applied to me for relief on account of a difficulty of breathing, which had lasted several days. He complained also of some stiffness and aching in the neck, but was otherwise well. The laryngoscope showed that the vocal bands did not separate for more than a quarter of an inch on deep inspiration. The larynx in general was quite healthy. Respiration was accompanied by a blowing sound. Hot inhalations were ordered, and in a week the patient returned almost cured.

[7] A strong, well-built man, aged forty, came under my care for dyspnœa, which had been increasing for about a week subsequent to an acute attack in the throat. Inspection of the larynx showed paralysis of the abductors of the vocal bands, which could not be separated beyond the cadaveric position. They had, moreover, a dull appearance, and were just perceptibly marked with a few pink spots. Generally the laryngeal mucous membrane was in a similar condition, and indicated the recent subsidence of a sharp attack of acute catarrhal laryngitis. Similar treatment to that in the last case was adopted, and the patient did not apply for further assistance.

[8] Diseases of the Throat and Nose, 1880, vol. i., p. 453.

mechanical injury of the muscles during deglutition, owing to their exposed position, accounts for many cases. Such injury is supposed to be maintained and increased owing to the unceasing activity of the muscles even when in a condition demanding temporary quietude. In proof he cites an instance from Ott,[9] in which the malady apparently arose from a piece of meat being impacted at the entrance of the œsophagus for twenty-four hours. Under ordinary circumstances such a conception of pathogenesis must appear far-fetched, nor can it be doubted that the activity of the muscles would be involuntarily modified were they in a tender state. Viewing, however, the rarity of cases of this disease (about one in two thousand of all laryngeal affections), it is possible to accept an equally rare etiology.

In the accompanying table of sixty cases of bilateral paralysis of the abductors of the vocal bands (nearly all published with sufficient detail) many points of its pathogenesis and practical relations are illustrated. Thus we can observe (*a*) that, though the disease may occur at any age, it is rare till after adult life; (*b*) that males are more frequently affected than females (two to one); (*c*) that the etiology is often obscure, and the line between neuropathic and myopathic examples cannot easily be drawn; (*d*) that the primary causes are extremely varied; (*e*) that many instances exist for years *in statu quo*; (*f*) that death from actual closure of the glottis is nearly always obviated by tracheotomy, &c.

Unilateral cases are probably much more common than bilateral, but owing to the slightness of their subjective symptoms must be constantly overlooked. On account of their slight semeiological importance in pure laryngology observers have not usually published the examples met with. Not requiring the concurrence of pressure on both vagi or recurrents, they remo are often associated with thoracic

TABLE OF SIXTY CASES OF BILATERAL PARALYSIS OF THE ABDUCTORS OF THE VOCAL BANDS.

Case.	Age.	Sex.	Neuropathic or myopathic.	Cause.	Known duration.	Result.	Authority.
1	25	Male	Myopathic	Rheumatism of neck &c.	3 weeks	Cure	Author
2	40	,,	,,	Laryngitis (sequel of)	2 weeks	,, (?)	,,
3	55	Female	,,	(?)	1 year	(?)	,,
4	45	,,	Neuropathic	Disease of medulla (?)	6 months	(?)	,,
5	48	,,	,,	,, ,, ,, (?)	6 months	(?)	,,
6	51	Male	,,	Aneurysms of arch &c.	Some weeks	Death	Mackenzie
7	67	,,	,,	Cancer of œsophagus	(?)	,,	,,
8	15	,,	,,	Enlarged thyroid gland	9 months	,,	,,
9	60	,,	,,	Aneurysm and enlarged bronchial glands	6 months	,,	,,
10	44	,,	,,	Disease of medulla	21 months	(?)	,,
11	30 (?)	,,	,,	,, ,, ,,	1 year	Death	,,
12	25	,,	,,	,, ,, ,, (syph. ?)	2 years	Improvement	,,
13	50 (?)	,,	,,	,, ,, ,,	3 years	Death	,,
14	35	,,	Myopathic (?)	,, ,, ,, (?)	2 years	,,	,,
15	61	,,	,,	Overwork of voice (?)	15 years	Tracheotomy	,,
16	34	,,	,,	Syphilis (?)	9 months	Death (tracheotomy)	,,
17	30	,,	,, (?)	Disease of medulla (?)	9 months	Cure	,,
18	61	,,	,,	Rheumatism (?)	1 year	Tracheotomy	,,
19	43	Female	,,	(?)	2 years	(?)	,,
20	40	Male	,,	Laryngitis (abscess)	21 months	Death (tracheotomy)	,,
21	29	Female	,,	(?)	1 year	(?)	,,
22	46	,,	,,	Syphilis (?)	1 year	Tracheotomy	Weakes
23	65 (?)	Male	,, (?)	Bronchocele (?)	28 years	(?)	Gerhardt
24	5	,,	Neuropathic	Mediastinal inflammation &c.	1 year	Death (tracheotomy)	Riegel
25	58	,,	Myopathic	Phthisis (?)	1 month	,, ,,	,,
26	61	Female	Neuropathic	Disease of medulla (syph. ?)	(?)	,, ,,	Pentzoldt
27	68	,,	Myopathic	Facial erysipelas &c. (?)	Some weeks	Tracheotomy	Feith
28	26	Male	,,	(?)	9 months	Cure	Ziemssen
29	13	,,	,,	Typhoid fever (?)	6 weeks	Tracheotomy	Rehn
30	27	,,	,,	(?)	6 months	(?)	Duranty
31	32	Female	Neuropathic	Hysteria (pregnancy)	10 months	Cure (2 tracheotomies)	Ayzaguer
32	25	,,	,,	,, ,,	(?)	Tracheotomy	Werner
33	67	Male	,,	(?)	6 months	Death (suffocation)	Heinze
34	36	,,	,,	Catarrh of larynx	2 years	Improvement	Klemm
35	33	,,	,,	,, ,, ,,	6 months	Tracheotomy	,,
36	43	Female	,,	Tabes dorsalis, or tubercle	Some weeks	(?)	Hischmann
37	36	Male	Myopathic	Catarrh of larynx	(?)	Cure (tracheotomy)	Glynn
38	62	Female	,,	Syphilis (secondary)	9 years	Tracheotomy	Böcker
39	19	,,	,,	Hysteria	3 months	Cure	Burow
40	24	,,	Neuropathic	Enlarged glands	18 months	Tracheotomy	Koch
41	30	,,	Myopathic	Hysteria	7 months	Cure	Schreiber
42	32	Male	(?)	Pressure from catarrhal thickening (?)	2 years	Death (tracheotomy)	Semon
43	47	Female	Neuropathic	Disease of medulla	2 days	(?)	Burow
44	62	Male	Myopathic	(?)	5 months	Death (tracheotomy)	,,
45	59	,,	,,	Catarrhal infiltration	(?)	(?)	Fischer
46	42	Female	Neuropathic	Syphilitic tumour of gullet &c.	3 months	Cure	Dreschfeld
47	40 (?)	Male	,,	Tabes dorsalis	1 year	(?)	,,
48	51	,,	,,	Aneurysm	3 months	Death (tracheotomy)	Semon
49	79	,,	,,	Cancer (post-tracheal ?)	18 months	,, ,,	,,
50	58	,,	,,	Cancer of gullet	4 months	,, ,,	Taylor
51	48	,,	,, (?)	Syphilis	1 year	Cure (tracheotomy)	,,
52	32	Female	,, (?)	Catarrh of larynx	2 months	(?)	,,
53	46	Male	Myopathic (?)	Diphtheria	15 months	(?)	Whipham
54	50 (?)	,,	Neuropathic (?)	Goitre (?)	2 years	(?)	Smith
55	31	,,	Myopathic (?)	Syphilis (?)	4 months	(?)	Hayes
56	49	,,	Neuropathic	Tabes dorsalis (incipient)	1 year	(?)	Weil
57	61	,,	,,	Aneurysm	3 months	Death	Hall
58	3	Female	,,	Persistence of thymus	Congenital (?)	(?)	Massei
59	46	Male	,,	Disease of brain or medulla	6 months	(?)	Bristowe
60	42	,,	,,	Phthisis (enlarged glands)	(?)	(?)	Gouguenheim

Note.—By "cure" is meant that the abductors ultimately regained their functions; by "tracheotomy," that life was maintained only by means of constantly wearing a cannula. In all fatal cases, except Nos. 16, 33, 42, and 44, death was manifestly due to the primary disease. Individual references to all the cases need not be given here. Burow's table, the only one hitherto published (Berliner Klinische Wochenschrift, 1879), gives the above details in twenty-eight cases, and there many of them will be found. Others are in Mackenzie (Diseases of the Throat, 1880), and a few again in Semon (Berliner Klinische Wochenschrift, 1883), bringing the number up to forty-six. Fourteen then remain to be accounted for. Two of my own have already been described; respecting Case 3, there is nothing to add; in Case 4 there was hemiplegic paresis, with anæsthesia, and in Case 5 partial paralysis of the tongue. The rest will be found as follows:—Thirty-one in L'Union Médicale, No. 46, 1885; thirty-six in Annales des Maladies de l'Oreille, &c., May, 1886; forty-five in Wiener Medizinische Wochenscrift, No. 19, 1885; fifty-five in Dublin Medical Journal, 1879; fifty-six in Berliner Klinische Wochenschrift, No. 13, 1886; fifty-seven in British Medical Journal, 1885; fifty-eight in Riforma Medica, Nos. 84, 85, 1885; fifty-nine in Brain, Oct. 1885; sixty in Annales des Maladies de l'Oreille, &c., Jan. 1886.

[9] Prager Medizinische Wochenschrift, No. 15, 1879.

aneurysm and lung tuberculosis than the bilateral form. Thus, out of twenty-three instances I find that nine arose from aneurysm and five from tubercle. Of these Semon[10] has collected sixteen cases, and seven have come under my notice. From a pathogenetic point of view the unilateral paralysis possesses a much greater importance than it does when regarded as a purely local lesion. Owing to the intimate relations of the recurrent nerves with the arteries within the chest, thoracic aneurysm or other tumours may produce this paralysis as a symptom of their presence long anterior to any other phenomenon clinically recognisable. Hence in suspicious chest cases examination of the larynx becomes a necessity, and *vice versâ*. The chest should be well explored on discovering the least grade of abductor paralysis.[11]

(To be concluded.)

SOME NOTES ON THE MINERAL SPRINGS OF AUVERGNE.[1]

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As the season has arrived when medical men are in the habit of suggesting for their patients additional therapeutic agents, in the shape of mineral waters, as a concomitant to change of air and scene, I thought a few notes on the many valuable springs of Auvergne, which I visited in the autumn of last year, would not be uninteresting to the Academy. Owing to the ease with which it can be reached from Paris by the Paris, Lyons, and Marseilles Railway, and the number and variety of the springs that exist in this volcanic district, Auvergne offers, in my opinion, one of the best localities on the Continent in which to choose a mineral water that will suit the therapeutic indications of most of the ordinary ailments physicians are called upon to treat. Situated in the midst of the most beautiful mountain scenery in France, and within easy reach of each other, these springs offer many attractions to the invalid, as well as to the daily increasing number of fashionable valetudinarians, who consider a course of mineral waters absolutely necessary in their annual existence. To one of the springs of this region—Royat, now so well known—I need not allude, as its character and therapeutic properties were so ably and graphically brought under notice by the late President of the College of Physicians, Dr. Cruise, in a paper read by him before the Academy of Medicine last year, that I could add nothing that he has not called attention to. There are other springs of this region to which it was his intention to allude in a future communication, and I trust he will not consider that it is in any spirit of anticipating him that the few remarks I have now to offer in connexion with them are made. The other springs to which I wish to allude are La Bourboule, Monte Dore, and Chatel Guyon.

La Bourboule.—This spring is now beginning to share with Royat an equal amount of popularity. The attention it is receiving at present from medical men in England, as a water particularly suited for the treatment of obstinate skin diseases, is calculated to make it ere long one of the most flourishing and fashionable, as it is at present one of the best, of the many springs of Southern France for such cases. Though for many years recommended by the Paris physicians for the value of its waters in such affections, it is only within the past seven or eight years, coincident with the growth of its increased accommodation, and the easier means of reaching it now by railway from Clermont—the capital of Auvergne,—that its value as a powerful arsenical spring has been recognised in these countries. The value of its waters is enhanced by its situation in the most mountainous part of Auvergne, being about 2600 feet above the sea level; and the invalids who now go there can reach it in thirteen hours from Paris. Laquelle, which is the railway station for both La Bourboule and Monte Dore, is distant only about five miles from either place, and comfortable omnibuses convey visitors from the station to both of these places on the arrival of trains. The Bourboule springs have two sources, the source Perrière and the source Chaussy, both identical in chemical composition. The Perrière spring supplies 388 quarts per minute, at a temperature coming from the earth of 140° F.; and both springs, in addition to containing arsenic, with the chlorides and bicarbonates of the alkalies, contain large quantities of free carbonic acid, which renders them sparkling and limpid in appearance. The first chemical analysis made of the Bourboule waters in 1853 showed them as containing a large quantity of arsenic, a quantity equal to twenty-one drops of Fowler's solution in each quart of the water, the largest quantity contained in any mineral waters now known. Professor Berthelot, in giving his opinion of the origin of the arsenic in these springs, says: "The conclusion at which I have arrived is that the soluble arsenic contained in the Bourboule waters takes its origin from the interior of the earth; it is brought up in the waters through the fissures in the granite, and is not produced by their contact with disintegrated earth schistes and other materials situated above the granite. Soundings were also made through the granite formations of a depth of 250 ft. below the surface by M. Perrière, who found the pure arsenic waters at this depth. Nine-tenths of the solids contained in these waters are salts of soda, with ammonia, potash, and lithia, with lime, magnesia, alumina, and traces of iron; while the acids contained in them represent arsenious, hydrochloric, and carbonic. In 1856 M. Gonod discovered in the sediment of these waters the presence of iodine. Professor Gubler, when studying the composition of these waters, considered the salts contained in them corresponded to the salts found in the blood. They may be described as thermal, alkaline, arsenical, chlorinated bicarbonate, gaseous waters. Ten years ago La Bourboule was only a mountain village, with a few houses and one hotel; it is now a town of fine hotels (of which there are over fifty), with two parks, a theatre, and casino, and twelve or thirteen medical men, several of whom speak English. As indicating the rapid growth of the place, statistics show that in 1865 only 600 patients underwent the course of treatment, while in 1877 there were over 2800, and last year there were over 10,000 or 15,000 visitors. In 1875 the first respectable bathing establishment was built by a Frenchman, Dr. Chaussy, and a few years later, in 1879, a company purchased his interest in the place and built two other establishments, one of which, the Grand Établissement, is capable of accommodating over 300 bathers at a time, and is completely fitted up with all modern improvements. The waters for drinking are brought into the central hall of this establishment, and all round are situated bath-rooms, and halls for inhalation of the waters in a state of steam, and apparatus for pulverising it for throat and laryngeal cases, with rooms for ascending and local douches and wet and dry massage. The latter form of treatment is carried out on the most approved principles by skilled masseurs, so that any physician desiring such a mode of treatment for his patients can have it carried out here in perfection. Dr. Chaussy left a record of the cases treated by him at the spring for a period of over twenty-nine years, and nine-tenths of these cases were scrofula, rheumatism, and gout, especially the cutaneous manifestations of these diseases; special mention was also made of their beneficial effects in cases of chronic rheumatic arthritis. The springs are also held in high repute for the treatment of intermittent fevers, chronic coryza, hay fever, nasal and pharyngeal catarrh, strumous or tubercular joints, bronchial catarrh, asthma, and emphysema. Judging from my own observation of the cases I saw there, skin diseases, especially psoriasis, eczema, and lichen, seemed the more numerous, with numbers of cases of naso-pharyngeal catarrh, for whom the waters in the form of nasal douche and spray seemed admirably suited. I also noticed numbers of cases of suppurating cervical glands. As showing the beneficial effects of these waters on cases of all kinds of skin diseases, the medical men from the other watering places are in the habit of sending them to Bourboule to be cured, and my friend Dr. Brandt told me that many cases of psoriasis and chronic eczema that were not cured at Royat rapidly got well by an after course of Bourboule. The waters have generally to be taken cautiously at first, beginning with half a glass three times a day, increased to a glass, and their high temperature and saline taste are rather agreeable to some. If taken in too large a quantity they cause colic and diarrhœa, but most patients (even atonic dispeptics) bear them well, producing in them a feeling of warmth in the stomach, and

[10] Berliner Klinische Wochenschrift, Nos. 48-49, 1883.

[11] This question has been well argued by Semon (loc. cit.) in his papers on Abductor Paralysis.

[1] Read before the Academy of Medicine, June 1st, 1887.

sharpening the appetite. The usual course of the baths and waters is twenty-one days, when saturation is supposed to be reached. As the altitude of Bourboule is high, the season does not begin until June, and it ends with September. The autumn months are generally considered the best, and medical men sending patients there should recommend a supply of warm clothing, as the evenings are often cold. The waters bear exportation well and keep a long time, and are, in my opinion, a most suitable form in which to administer arsenic, from the ease with which they can be assimilated by the most delicate stomachs. Either source will do, as they are both exported, and it is quite immaterial whether the brand indicates the source Perrière or Chaussy, as the waters are identical.

Monte Dore.—Monte Dore, which is four miles higher up in the same valley (the valley of the Dordogne River) than Bourboule, is reached in the same time from Paris. It occupies, however, a higher altitude than the latter, being about 4000 ft. above the sea level, and enjoys a cooler climate. Its waters are below those of La Bourboule in temperature, being 113° F. as they come from the earth. Like the Bourboule waters, they contain arsenic, but in smaller quantity and in combination with iron, which latter exists in the Bourboule water as the merest trace. They are therefore considered more tonic than the Bourboule waters, but are not, in my experience, so easily assimilated or drunk by the visitors in such quantity. The springs of Monte Dore were known to be three in number since the last century. They are now nine, and the united quantity of water they give is equal to that of Vichy. The Cæsar spring is the best known, and contains the largest quantity of free carbonic acid. The Raymond spring, which is the most ferruginous, is the one most generally drunk in conjunction with the Madeline, which contains much less iron. These three springs are the principal ones. The springs of Monte Dore are very ancient: they were known to the Romans, and the remains of their baths are still to be found in tolerable preservation where they were hewn out of the solid rock at the foot of which Monte Dore is built. The bathing establishment of Monte Dore consists of two parts: the establishment proper, and another building called the Vapour Establishment. In the first were found the remains of the Roman Picina, where the waters came hot from the foot of the mountain. In 1877 two new halls were added to the pavilion—built in 1856,—with thirty-six bathing closets, which originally contained only seven baths hollowed out of the rock. These new halls contain from fifty to sixty bath rooms, with a Picina or bathing place, one of which is reserved for the poor gratis. The vapour establishment is, however, the great feature of Monte Dore. It was opened in 1852. On the ground floor are two galleries upon which sixteen vapour-douching closets open, eight on each side: between these two galleries are two pulverising halls, one on either side for each sex, for the treatment of affections of the throat and naso-pharynx. Each inhaling hall gives access to another smaller room where patients can breathe a less thick and hot vapour. Each patient before entering these halls is provided with a suitable waterproof dress worn over their ordinary clothing. A hundred patients at least can be accommodated in each inhalation hall. In 1877 the number of these inhalation halls was increased. The objects of inhaling the waters in a state of steam is to promote the absorption of their chemical constituents into the blood through the bronchial mucous membrane, and to medicate the bronchiæ and lungs locally should they be diseased. That the waters have a sedative action on the bronchial mucous membrane administered in this form we cannot deny, and the doctors of Monte Dore ascribe it to the carbonic acid present in the waters. They illustrate the sedative and anæsthetic action of carbonic acid applied locally by getting patients with neuralgia of the face to hold the painful part over a tube placed over one of the springs as this gas escapes from it coming from the earth, and into which it is received, and they find after a few minutes complete relief from pain, while considerable anæsthesia of the parts is produced. They also use what is called a carbonic acid bath to relieve neuralgia or gouty pains occurring in the joints or muscles. Monte Dore enjoys a high reputation for the treatment of asthma, both of the spasmodic and bronchial kinds, and judging from its sedative action on the bronchial mucous membrane when applied in the form of steam inhalations, its good effects in the latter form are undoubted. In the spasmodic form of the disease, which we now know is so often dependent on the presence of poisons in the blood, derived either from ptomaines or the unoxidised products of urea circulating in the blood, my own impression of the efficacy of the waters in this affection is that they play a very doubtful part in the cure, which is, I think, more due to the bracing mountain air and the better oxidation of the blood and better assimilation of food which takes place in such a high altitude. Dyspepsia on any diet in such an altitude is consequently unknown, and quickly disappears after a short stay in Monte Dore. The Monte Dore doctors speak in glowing terms of the curative effects of the waters, when inhaled in the form of steam vapours, on ulcerating tubercular cavities in the lungs. My own impression is that change of air and the high altitude have more to do with any beneficial effects that are the outcome of their use than anything contained in the waters themselves. There is one feature in the manner of using these steam vapours which, judging from the recent light thrown on the pathology of phthisis, is certainly to be condemned—namely, crowding a number of cases of lung affections into a close moist atmosphere. We know such an atmosphere is just the very one in which the bacilli of phthisis is most at home, and there is every reason to suppose that mild or non-infected cases are likely to become the receptacles of the microbe, if they are not so already, by breathing such an infected atmosphere. I expressed such an opinion to one of the medical men there, and he agreed with me, and said the authorities of the place were taking steps to fit up separate inhalation rooms for each phthisical case, instead of having them, as at present, all crowded together. The medical men of Monte Dore do not consider the presence of hæmoptysis any contra-indication for the use of the waters, as they act, in their opinion, as astringents, both internally and topically; and they treat active hæmorrhage from the lungs by immersion of the feet in the rock-hewn baths where the water comes directly from the earth at its highest temperature, considering the revulsive action thus produced acts like the application of a Junod's boot. Besides cases of phthisis, most of those I saw at Monte Dore were cases of bronchitic asthma, emphysema, laryngeal affections, including tubercular ulceration of the larynx, laryngo-pharyngitis (clergyman's sore throat), rheumatism, uterine affections, palpebral conjunctivitis, and also chlorosis. The place enjoys a great reputation amongst singers for its effects on all laryngeal troubles, and, judging by the numbers who come there, they must derive benefit from it. The season at Monte Dore begins late (end of June), and is generally over by the beginning of September. The hotels are numerous and good, but the village itself is a dirty and an uninteresting one.

Chatel Guyon.—The third spa which I have mentioned, Chatel Guyon, is situated in a charming and picturesque valley of Auvergne, about six miles by road from Royat. Riom would be its railway station coming from Paris. Chatel Guyon is called by the French physicians the Kissingen of France, and its springs are very numerous, bubbling up in all directions over the place. Unlike Kissingen, its waters are hot, and not nearly so bitter or disagreeable to the taste. The amount of carbonic acid contained in the waters, and which escapes from the earth in every direction, makes the ground (especially in the large bathing establishment) quite hot under the feet. Their taste is slightly salt and acidulated, leaving a styptic after-taste. If drunk at the spring the saline taste is masked by the carbonic acid present, but if allowed to stand for some time the gas escapes and the saline taste reappears. The waters as analysed by Dr. Magnier, of the laboratory of the Paris School of Medicine, shows them as containing a large quantity of chloride of magnesium—thirty grains to the quart,—to which their aperient action is due. They possess also very considerable diuretic properties. This analysis also shows them as containing, besides the chloride of magnesium, chloride of sodium, and bicarbonates of lime, soda, potash, and iron. When kept in a closed vessel these waters deposit their iron, with a small quantity of carbonate of lime and magnesia. For this reason the waters do not look well when exported if kept for any length of time. After taking a few glasses of these waters hot from the spring, there is a feeling of intestinal gurgling, followed by an abundant bilious discharge, with either copious diuresis or a free action of the skin. Although the peristaltic action of the bowels is rapid, it is neither preceded nor accompanied by griping or pain. The stomach feels no inconvenience from the use of these waters, except in cases where the drinkers take too large quantities at short

intervals. In some cases of obstinate constipation the laxative effect is not produced the first day, but when it is once produced it continues uninterruptedly without pain or inconvenience. The internal effect of these waters is considerably assisted by the action of the baths, which, from the large quantity of carbonic acid gas present in them, has a most exhilarating effect on the bather, producing a feeling of what the French call "bien-être," which none but an atonic dyspeptic can sufficiently appreciate. Owing to this effect, when used as baths, and taken internally, the waters are largely availed of by dyspeptics, and for many such cases these waters are superior to Royat, the waters of which, as is known, have no aperient action. The cases that seemed to me to frequent Chatel Guyon were those of obstinate constipation, and the medical men of the place speak in high terms of their effects in such cases, and that when once the habit of a daily evacuation is produced by their use the good effects continue after leaving the spring. I also noticed a number of people who came there to get cured of obesity, for the treatment of which the waters enjoy a considerable reputation; and Professor Gubler considers them especially useful in cases of Bright's disease and diabetes. The waters also occupy a high position in the opinion of gynæcologists as a remedy in endometritis, uterine catarrh, leucorrhœa, and dysmenorrhœa.

In concluding these remarks, I have only to add that those who visit Auvergne either for health, recreation, or amusement, will not come away disappointed. And the invalid who cannot find among its many mineral springs one to suit his particular ailment is not likely to find it elsewhere, but he cannot fail, at all events, to come away much impressed by its splendid scenery and improved by its bracing mountain air.

Dublin.

CASE OF

EPITHELIOMA OF THE TONGUE; REMOVAL OF LEFT HALF.

REMARKS ON THE OPERATION AND AFTER-TREATMENT.

BY LOCKHART STEPHENS.

MRS. H——, aged forty-two, first came under observation on Feb. 17th of this year for an ulcer on the left border of her tongue of five and a half months' duration, caused by a sharp point on the first lower molar of the left side. There was no history of malignant disease in the family or of syphilis in herself. The ulcer occupied the middle third of the left border of the tongue, extending slightly on to the dorsum, but more on to the under surface, and its character was that of epithelioma. No glandular enlargement. The rest of the tongue looked healthy. Early removal of the left half of the tongue was strongly advised. For a week before operation the mouth was well washed out six or eight times daily, and especially after taking food, with a saturated solution of boracic acid. On March 1st, chloroform being administered through the mouth by Mr. Palmer Stephens, laryngotomy was performed, and a silver tube tied in, through which the anæsthetic was then administered till the end of the operation. Assisted by Mr. Rory Fletcher, I proceeded to remove the left half of the tongue. The back of the pharynx was well plugged with two pads of sublimated wood-wool wadding, and the mouth well washed out with the boracic acid solution. Nearly the whole of the left half of the tongue was removed according to Mr. Whitehead's directions, with this exception, that instead of scissors a stout blunt director was used to tear through the muscles down to the lingual artery, which was ligatured before being divided. Except a few small vessels, which were readily stopped under sponge pressure, there was no bleeding beyond a general slight oozing. The mouth was again washed out with the boracic acid solution, and the pads removed from the pharynx. Although the anterior parts of the pads were saturated with blood, the posterior parts were quite clean, showing that no blood had passed through or by them. The cut surface of the tongue was painted over with iodoform suspended in ether, whereby a uniform even coating of the powder was deposited. The laryngotomy tube was now removed, and the wound sealed with iodoform collodion. A small wood-wool pad was placed in the floor of the mouth, a strip of iodoform gauze laid over the teeth, and the mouth completely covered with an antiseptic pad made of sublimated wood-wool wadding in iodoform gauze. During the day, after the operation, some eight or ten of these pads were required, as all saliva and discharge passed into them before coming into contact with the air of the room. For the first four days the treatment consisted in the patient washing out her mouth three times daily with the boracic acid solution, iodoform being applied on each occasion. All nutriment was administered per rectum by means of enemata prepared with the extractum pancreatis and zymonised suppositories, which were given every four hours. The temperature never rose above normal, nor was there at any time the least odour to the mouth beyond that of the iodoform. On March 5th the patient drank half a pint of warm peptonised milk three times during the day in addition to the feeding per rectum, which was continued until the 11th, the diet consisting of milk, ox-tail soup, jellies, and beef-tea, all of which were peptonised. On the 11th she was able to go for a drive, and was gaining flesh. On the 17th the tongue had almost healed, and was feeling soft and natural. No glands could be felt. The patient was ordered to do very little talking for the next six weeks, and at most for only a few minutes at a time: to eat no solid food which would be likely to irritate mechanically, and to avoid hot and pungent articles of diet; also to take extract of malt with peptones three times daily after meals. On April 23rd it was noted that she had gained weight and strength since taking the malt.

Remarks.—That there is still much difference of opinion in the minds of surgeons as to the best method of operation and after-treatment of cases of epithelioma of the tongue is, I think, obvious from the different accounts to be found from time to time in the medical press and literature. The success of operators in Germany is in advance of those in our own country, if I am rightly informed, and this seems to be due mainly to their more elaborate application of antiseptic principles in operations on the tongue and jaws. Having had the opportunity of watching cases of removal of the whole or part of the tongue by nearly all the methods practised in this country, I believe that removal with scissors through the mouth is in most cases the best, in that it admits of antiseptic measures throughout, both as to drainage of the mouth and keeping the discharge aseptic. For at least a week before any operation on the tongue the patient should be instructed to wash out the mouth frequently, and especially after taking food, whether solid or liquid, with some antiseptic lotion, such as a saturated solution of boracic acid. The offending tooth or teeth should be extracted some three or four days before operation, in order that there may be no unnecessary oozing of blood after the tongue is removed. In the place of sponges I used pads of sublimated wood-wool padding enclosed in iodoform gauze, of various sizes, such as are largely used in most German hospitals, and found them most satisfactory. These pads can be made of any size, and are admirably adapted for making firm pressure on a bleeding point; they absorb well, and are readily seized by any kind of forceps or sponge-holder, and as any number of them can be ready to hand no time need be taken up in washing, as in the case of ordinary operation sponges. At first sight it seems difficult to apply an antiseptic dressing to a tongue case, but the difficulty is, I think, more apparent than real. After painting the tongue with the iodoform ether, the application of which causes a little smarting, not amounting to pain, and leaves a good even film over the wound, I well covered the mouth with a wood-wool pad, and kept it in position by elastic loops over the ears. By this means all saliva passed through a layer of absorbent antiseptic material before coming into contact with the external air. A number of these pads should be prepared for use, and a fresh one applied on each occasion of washing out the mouth or on its becoming saturated.

Mortality after operation.—In Mr. Butlin's work on "Diseases of the Tongue," I find up to Oct. 16th, 1884, Mr. Whitehead had removed the *entire* tongue in fifty-eight cases, with nine deaths, of which five were due to septic pneumonia. Mr. Morrant Baker at the same date had operated in "forty cases, with four deaths, of which three were due to septicæmia or septic pneumonia." Mr. Butlin, in discussing the causes of death after operation, says: "Although hæmorrhage cannot be made directly responsible for many deaths, it exercises a very large indirect influence on the results of operations. ..... The small quantity of blood which is lost is, in part at least, swallowed, and in part passes down into the trachea and bronchi. It is liable

to undergo decomposition, and is probably a very important factor in the production of the earlier deaths from affection of the lungs and septic poisoning." Again, "the most common, and that to which attention cannot be too persistently directed, is affection of the lungs."

The fact that in nearly all these cases of lung affection the condition is due to septic changes is sufficient evidence that it is theoretically (and why not practically?) preventable. The possibility of *any* blood, no matter how small the amount, obtaining entrance to the air passages is of itself an element of danger and should be prevented. This in the hands of very skilful surgeons may be possible; but with many operators the safer plan would be to perform laryngotomy as a preliminary step, and to make sure that the pharynx was efficiently plugged before commencing the main operation. For this suggestion and others I am indebted to my friend Mr. Jacobson, of Guy's Hospital. So little inconvenience did the laryngotomy wound cause, that to this day, so far as I am aware, my patient does not know that she had a laryngotomy tube in for some twenty minutes. No additional risk is incurred by this precaution; but with the pharynx plugged a great source of danger is avoided. In connexion with the operation there is one point which cannot be too strongly insisted upon, and that is to stop each bleeding point as it is met with.

With regard to the after-treatment, the customary practice is, I believe, to omit feeding per rectum as soon as food can be taken by the mouth. With many cases this is not wise; for by the rectum a large amount of nutriment can be very efficiently introduced into the system. One reason for the early omission of rectal feeding has been the irritability of the bowel, which soon follows the use of ordinary nutrient enemata. This difficulty, formerly a real and practical one, has been overcome by the use of nutrient suppositories and peptonised enemata.

Emsworth, Hants.

CHLORIDE OF AMMONIUM IN THE TREATMENT OF HEPATIC DISEASE.

By SURGEON-GENERAL W. STEWART, M.D.

THE method of treatment of hepatic disease by chloride of ammonium having been lately brought prominently forward in the columns of a contemporary in connexion with the controversy arising out of the discussion on Dr. Harley's paper on Hepatic Phlebotomy, read at the late Brighton meeting of the British Medical Association, I think the present an opportune moment to again revert to the subject, which I hold to be one of supreme interest and importance, seeing the great extent of our Eastern possessions, and the suffering and mortality from hepatic disease to which a large body of our troops and officials are exposed by service therein.

It is not my intention at present to touch on the surgical procedures that may be advisable in certain forms and stages of hepatic trouble. In a future paper I hope to say something on that point. Meanwhile I am tempted to quote the pertinent remarks made by Surgeon Thornton, in his highly interesting and suggestive paper read at the above meeting, that "we may include the liver in the domain of surgery, always, be it understood, when the physician says, 'I can do nothing more here.'" In his interesting letters on this subject in a contemporary,[1] my old friend and former brother officer, Brigade Surgeon W. Alexander, of Streatham, under the heading of "Chloride of Ammonium *versus* Exploratory Incisions in Inflammatory Diseases of the Liver," not only bears testimony to the great value of the chloride of ammonium treatment in his own hands, at home and in India and Burmah, but makes pointed allusion to the fact that "it is not generally known in this country." Surgeon-Major Ryan, too, in his able communication in the same journal,[2] bears similar testimony both as to its value and its inadequate appreciation by the profession at home.

Elsewhere,[3] I have ventured on a detailed explanation of the action of the chloride of ammonium, both special and general, in hepatic congestion. I have shown how, as long as that condition lasts, a local depletion is effected from the portal capillaries by each succeeding dose of the drug; and how, at the same time, by a species of auto-transfusion from the portal into the general circulation, the entire portal system, from its origin in the venous radicals in the intestinal mucous membrane, is freed from engorgement, and thus the liver is not only relieved from congestion and its functions restored, but the occurrence of dysentery, so apt to supervene in hepatic congestion, and particularly in tropical abscess, is prevented. The depletion of the congested abdominal viscera thus effected, unlike that by leeches or other local means, is not attended with depression or loss of vital fluid, a loss which in such cases is but ill borne.

Since the publication of my first paper on this subject in THE LANCET of May 7th, 1870, the chloride of ammonium treatment has been embodied in several of the leading text-books, both in this country and America. But I am sorry to say that, with the exception of Professor Aitken, not one of the English writers has given the details of the auxiliary treatment, diet, and management, without attention to which I have all along held its full success could not be attained. Murchison, however, adds his own testimony to "its great utility in hepatic congestion in this country as well as in India," and as the *general* effects of the chloride of ammonium, in hyperæmia of the liver, are summarily and tersely described by him, I cannot do better than reproduce them here. "In doses of twenty grains, two or three times daily, it induces free diaphoresis, increases the flow of urine, diminishes portal congestion, and relieves hepatic pain. It is believed also to stimulate the absorbents, especially those in the liver, and thus to effect the absorption of hepatic abscesses."[4]

Those who have seen the acute congestion of the liver in the East, as it reacts under the systematic use of the ammonium chloride, know how true all this is. But to those who have no experience of its effects in such cases, or who have only employed it in chronic cases, which have been ineffectually treated in India, till the liver has become chronically enlarged and demoralised, so to speak, so as to be much less amenable to the action of the remedy, the above statements may appear somewhat surprising. The latter class of cases, however, are those likely to be met with in invalids from abroad, whether in the private practice of the specialist or in the Royal Victoria Hospital, Netley. Indeed, the same may be said of the various convalescent depôts and general hospitals in India, into which similar cases make their way from up-country and out-stations after a variety of remedial measures have been employed and failed to effect a cure.[5]

In the limits of a paper of this kind it is impossible to do more than present a short summary of the auxiliary treatment, diet, and management of cases of hepatic congestion and tropical hepatitis, and of the rules to be observed in the administration of the ammonium chloride. But before doing so I must give a brief account of the *special* and characteristic symptoms produced by the drug in hyperæmia of the liver, which are peculiarly and directly referable to the liver and related parts, and for which it is necessary the doctor should be on the look-out, lest they be mistaken as evidences of the medicine disagreeing. They are, on the contrary, signs of its successful action—success signals, so to speak,—and as such should be carefully noted. The liver once freed from congestion, they, along with the *general* symptoms, are no longer manifested, and hence their occurrence after the administration of the drug in any given obscure case may be considered *diagnostic* of hepatic disease.[6]

The symptoms now to be described occur shortly after the medicine is taken, in from five minutes to half an hour. Sometimes a "shock" is felt, or as if "something gave way" in the side; at other times a succession of shocks is experienced in the hepatic region, accompanied or not by a

[1] British Medical Journal, Dec. 24th, 1886, and Jan. 29th, 1887.
[2] Ibid., Feb. 5th, 1887.
[3] The Treatment of Hepatic Disease, pp. 21-35. London: Smith, Elder, and Co.
[4] For its use in the congestive stage of cirrhosis, see also Ringer's Handbook of Therapeutics.
[5] In this statement I also include cases in which, although the chlorides of ammonium may have been used, it has not been systematically or persistently administered. That such cases are of very frequent occurrence, a long experience in charge of the European Detail Hospital at Madras, and afterwards as Deputy Surgeon-General of the district, has convinced me.
[6] For an account of the *general* symptoms produced by the drug in hyperæmia of the liver, which are equally characteristic and remarkably regular in the order of their occurrence, see my monograph and paper in THE LANCET, May 7th and 21st, 1870, above quoted.

pricking sensation ("pins-and-needles"), or as if cold water were trickling down the side; or the action is described as that of "a pulling" from one hypochondrium to the other, or from the margin of the right costal arch upwards and backwards as if through the liver; or a "clawing," "working," or "gnawing sensation" is spoken of as felt by the patient. When a single sharp shock is experienced in a debilitated, nervous, and susceptible subject, it is often severe; and I have known the patient to cry out in consequence, frightening the other patients in the ward, and being himself alarmed. Immediately afterwards, however, the severe hepatic pain vanished, and never again returned with its original severity; and with each succeeding dose a sensation of "pulling" only was felt in the hepatic region, till at length all sensible action ceased with the removal of the hepatic congestion, the case being one of simple enlargement of the liver. With the local actions excited in the liver and related parts—through reflex nervous action—when a full dose of the drug has been taken, motor impulses are similarly communicated to the muscles of the intestinal canal, causing its peristalsis to become more rapid and energetic, as evidenced by the "twisting" and other movements experienced in the situation of the duodenum, or all over the abdomen, and which at times are more sensibly felt in particular parts, in the situation of the umbilicus, or in the inguinal region. Simultaneously with or closely following the above phenomena, the abdominal muscles may be thrown into tonic contractions, which are perceptible at times to both sight and touch; and pulsatile movements are felt and are sometimes visible along the margins of the right inferior ribs. I have, in my monograph[7] above referred to, shown that all these phenomena are highly purposive, contributing, with other vital actions and processes brought about by the drug, to diminish portal congestion, restore the diseased liver to a healthy state, and afford relief to the entire system.

The following is a summary of the auxiliary treatment, diet, and management of congestion of the liver, and mode of administering the ammonium chloride:—

Bearing in mind what has been said of the therapeutic effects of the drug in hyperæmia of the liver, and the indications to be drawn from the symptoms and pathology of the disease, the first thing to be done is to put the patient to bed, there to remain, in acute cases, during the whole course of the disease; in short, till the congestion, pain, and general and local distress and uneasiness shall have subsided, and that the patient may have no occasion to quit his bed, a bed-pan and urinal should always be at hand, as well as a trusty attendant to minister to his wants. By the recumbent position and the avoidance of all sudden and violent movements, mechanical rest and support are given to the enlarged, weighty, and oppressed or painful organ. The horizontal position, too, facilitates the auto-transfusion of the blood from the portal system, through the hepatic capillaries, into the general circulation, under the influence of our special remedy—a process which will be better understood now that the reader is in possession of the details of the local signs expressive of the effects produced by it: the excitation of the muscles of the intestinal canal to increased peristalsis, and those of the abdomen and thorax surrounding the liver to tonic contractions, by which muscular pressure is brought to bear on the radicals of the portal vein, and on the liver and gall-bladder, which not only hastens forward the entire portal stream, but may squeeze out of the liver some of the superfluous blood as well as free it and the gall-bladder from retained bile. By the increase of the functional activity of the liver, as well as the increased flow of blood to the skin, as a further result of its action, a *vis a fronte* is brought into play in aid of the *vis a tergo* above described, by which the equilibrium of the entire circulation is speedily restored. The free perspiration induced by the drug is also promoted and chills avoided by the rest and warmth of bed. I have shown elsewhere that it is to this latter stage of its operation that much of its value is due—the free diaphoresis favours sleep, while the nervous system generally is exhilarated and soothed, and the patient almost entirely relieved from all his distressing symptoms.

It is equally important that the congested (or, it may be, inflamed) liver should enjoy, as far as possible, physiological rest. To this end, on no account must solid food be given to the patient, and wine, beer, or other alcoholic stimulants must be strictly prohibited. The diet must be of the least irritating character, and only small quantities of milk, beef-tea, or farinaceous articles should be taken at a time. Barley water may be taken freely as a drink. If there be diarrhœa, the patient passing frequent loose bilious or dark-coloured motions, a pill composed of two grains of mercury and three grains of Dover's powder, repeated every two hours till four or five have been taken, will be found the most effectual means of checking it without the risk of setting up gastro-intestinal irritation. Looseness of the bowels, however, does not contra-indicate the use of the chloride of ammonium—indeed, it is in itself the best remedy in cases of diarrhœa associated with hepatic congestion. The only condition which contra-indicates the immediate use of the drug in acute cases is the existence of a combined hot and dry state of the skin with pyrexia. Under such circumstances its use should be preceded by a few small and frequently repeated doses of solution of acetate of ammonia, till the skin is rendered moist and perspirable. Pyrexia being absent—or, if present, the skin being soft and perspirable,—the chloride should be at once commenced and persistently administered in doses of twenty grains twice or thrice daily, with strict attention to the rules above laid down as to diet, rest in bed, &c., till it no longer produces sensible effects, or till all local uneasiness, hepatic pain, and tenderness have subsided. Fomentations or hot bran-bags applied to the seat of pain in the side will be of use in aiding determination to the skin generally, as well as by their local soothing effects.

The following case illustrates the beneficial action of chloride of ammonium, as well as the characteristic and *special* symptoms following its administration in the various forms of liver congestion met with in India and other tropical countries. But congestion of the liver and functional derangements are of more frequent occurrence at home than is generally imagined, and our special remedy has been found to be of great service in this country, not only in congestion, but what is commonly known as "torpor of the liver" and functional derangements, attended by lithæmia (Murchison), associated with congestion of the liver, want of sleep, and depression of spirits, in all of which cases the drug is pre-eminently useful.[8]

H. C—— was admitted into the hospital, Secunderabad, on Nov. 9th, 1880, suffering from simple enlargement of the liver, with much pain and tenderness in the right hypochondriac and epigastric regions. He stated that for about six weeks prior to admission he felt more or less uneasy in the right side. This feeling was not one of pain, but gradually prevented him lying on either side, owing to a sensation of weight and increased uneasiness in the hepatic region; and this feeling was increased by lying on the left side. For about three days before reporting himself sick he experienced a dragging pain in the right side. For some time previously to admission he felt a bitter taste in his mouth on rising in the morning. On admission the left lobe of the liver was found to descend to within two inches of the umbilicus, and hepatic dulness existed in the right mammary line to within two inches of the crest of the ilium. There was exquisite tenderness all over the hepatic region on gentle pressure. Decubitus dorsal; bowels regular; temperature normal; pulse 74. Chloride of ammonium (twenty grains) was given thrice daily, fomentations were applied to the side, and the patient ordered not to quit or move suddenly in bed.—Nov. 10th: Medicine acted characteristically, producing symptoms which the patient described as follows:—A short time after taking the medicine a sensation of "pins-and-needles" starts from the middle line in the lumbar region, and travels slowly up along the margins of the ribs of the right costal arch, and on reaching a point corresponding to the right mammary line remains stationary for a while, and is then followed by a "darting" at the above points, when the pain subsides, and he remains relieved for a considerable period.—12th: Yesterday evening the patient sent for the apothecary on duty, complaining of severe darting pain situated at the margin of the ribs in the right mammary line. He was hysterical and sobbing. He said the pain came on a short time after the last dose of the medicine—about half an hour previously. The pain increasing in intensity, he either lifted or "felt himself lifted up," as he expressed it, and immediately

[7] See also the Madras Monthly Journal of Medical Science for February and March, 1872.

[8] Murchison: Clinical Lectures on Diseases of the Liver. Edited by Dr. Lauder Brunton and Sir J. Fayrer. Third Edition. Pages 138, 206, and 687.

afterwards felt another dart, worse than before, and something seemed to slip up, and he felt relieved and went to sleep. The lower margin of the liver has receded an inch and a half higher up from the point previously noted, and the pain and tenderness are much relieved. Continue treatment.—14th: The liver has receded in the right mammary line to its normal position under the ribs, and the left lobe is now nearly of normal dimensions. Temperature normal; pulse 74; bowels regular. Pain and tenderness over the hepatic region much diminished, and medicine still acts characteristically, but its action is not so marked. Continue treatment, and low diet as before.—16th: Pain and tenderness gone. Liver enlargement entirely reduced. The local action of the medicine is not now so marked. The sensation of "pins-and-needles," commencing in the centre of the lumbar region, reaches only to a point an inch from the right mammary line in the course of the costal arch. Continue treatment.—20th: Doing well. Medicine produces no sensible action. No pain or tenderness anywhere, on pressure or movement. Countenance clear and bright. Colour returning to face. Continue treatment.—26th: Doing well; chloroide of ammonium (ten grains) given thrice daily. To have chicken diet. Allowed up for half an hour daily.—30th: Discharged from hospital quite well, but a little weak. To attend hospital as a convalescent for a few days.

The above case furnishes a good example of that state of disordered liver—well described by Annesley more than seventy years ago—so common in the stations of the Madras Presidency, which, commencing in imperfect discharge of the liver functions, when long continued terminates in congestion of the portal veins and engorgement of the ducts conveying the bile from the secretory structure of the organ. If this stage or form of disease be neglected, or only partially recovered from, it will terminate in a longer or shorter time, according to circumstances, in inflammatory action of a subacute kind with marked tendency to suppuration, in a limited portion or portions of the parenchyma. But in tropical hepatitis, no matter what may be the stage, the ammonium chloride is still the one special remedy for the specific disease, as I have fully shown, and amply confirmed by the statistics and cases published in my monograph. In the *Indian Medical Gazette* of July 1st, 1881, will be found further statistics on the subject; but as this paper is, I fear, already rather long, I must reserve what I have to say on that point for a future occasion.

Lymington, Hants.

TWO CASES OF EMPYEMA.

BY JAMES W. FRASER, M.D. C.M. EDIN., M.R.C.S. ENG.

THE following almost parallel cases of empyema illustrate the well-known superiority of the treatment by early incision and dry antiseptic dressing.

CASE 1.—Ellen J. C——, aged eight years, was first seen on April 15th, 1886, in an acute febrile condition, depending apparently on the inhalation of sewer gas. This was followed by left-sided pleurisy with effusion, which increased in spite of treatment until May 13th, when the heart was found to be beating entirely to the right side of the sternum. Aspiration was therefore employed on that date, and the effusion, which was serous, was removed, the heart returning to its proper position, or nearly so. The fluid, however, reaccumulated; but the aspiration had had such a demoralising effect on the parents, and the child herself was so unmanageable, that when further operative interference was declined it was not strongly urged. The effusion increased, becoming purulent, and pointed in the mid-axillary line in the sixth interspace, the opening taking place spontaneously on July 16th. Preparations for the discharge were made by washing the skin with carbolic lotion and covering the side with a thick layer of corrosive sublimate wood-wool wadding. No further antiseptic precautions, beyond the insertion of a drainage tube and in the later weeks of the treatment washing out the side with weak iodine water, were taken, but the discharge never became offensively septic; still it was so abundant as to require the dressings to be changed daily until Aug. 10th. It was not until September 11th that the child could be sent from home,—even then with a small discharging sinus. She has since been seen, and the chest appears equally resonant on both sides, nor is there any lateral curvature.

CASE 2.—Charles P——, aged nine years, had a very slight attack of scarlet fever, the rash appearing on March 31st, 1887. He progressed favourably until early in April, when he apparently caught cold, and the signs of left-sided pleurisy were discovered on April 13th. The effusion increased rapidly, and the apex beat of the heart on the 15th was to be felt to the right of the ensiform cartilage. The aspirator was used on that day, and the effusion was found to be purulent. The fluid reaccumulated, and the boy passed into a hectic condition, with diarrhœa and an evening temperature of 102·5°. Though this patient was fully as unmanageable as the former, the parents were more reasonable, and their consent to opening the side was readily obtained. This was therefore done on the 21st, cocaine being used as the anæsthetic, and full antiseptic precautions taken. The carbolic spray was used, and when the natural flow of the matter had ceased, a further quantity was removed by the method of perflation described by Dr. Ewart in THE LANCET (vol. ii. 1886, p. 226). The incision was in the sixth interspace behind the posterior axillary line. A large-sized drainage tube was introduced, and a dry dressing of corrosive sublimate wood wool applied. The dressing was only changed when the discharge came through, which for the first week was night and morning. Signs of carbolism were seen on the 24th, depending partly on the liberal use of the spray and partly on the carbolic lotion used to purify the air used in the perflation. Tincture of iodine was substituted for the latter, and the dressings were performed as rapidly as possible and the carbolism disappeared. The temperature fell to normal on the day after the operation, and all went on well until May 2nd, when the hectic fever and diarrhœa recurred. These appeared to be caused by the dressings blocking the mouth of the tube, for when this was remedied the use of aromatic sulphuric acid and tincture of bark soon reduced the temperature and controlled the bowels. On May 20th the tube was found to have been pushed out, and the only sign of the disease was a sinus less than half an inch deep. The boy is now perfectly well and the lung is evidently well expanded, though the left side is still less resonant than it should be.

From the opening of the abscess to the time of full recovery in the first case was seven weeks, from the incision to the full recovery in the second four weeks; a clear saving of three weeks by antiseptic incision and dry treatment, to say nothing of the saving of all the time occupied in the natural passage of the pus to the surface in the former. Two minims of a 10 per cent. solution of cocaine was the anæsthetic used in the second case, and the boy, though he roared lustily all the time, confessed afterwards that he never felt the knife. In order, if possible, to obtain quietness by removing the pain even of the prick of the subcutaneous needle, a 5 per cent. ointment of cocaine in lanoline was rubbed into the side, but only appeared to deaden the pain; possibly a 10 per cent. ointment would have been more successful. The use of tincture of iodine instead of carbolic lotion in the wash bottle of the perflation apparatus is also important by reducing the danger of carbolism.

Hull.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN.

TWO CASES OF CALCULUS; OPERATION; REMARKS.

(Under the care of Mr. JOHN H. MORGAN.)

As is well known, a very great revulsion has taken place of late years in the treatment of calculus at all ages, and the more general application of lithotrity, with complete evacuation, has proved so satisfactory in its results in adults that surgeons are turning their attention to the question of its applicability in the case of children. Whatever the verdict that may be arrived at in future, cases will arise in

which lithotomy must be the operation preferred, and then comes the question as to the choice of the old and well-tried lateral operation or the more recently advocated one through the abdominal parietes. The following two cases (for the notes of which we are indebted to Dr. Penrose) may serve to illustrate the question of choice, and also to emphasise the satisfactory results obtained by either operation in suitable cases.

CASE 1. *Embedded calculus; supra-pubic lithotomy; recovery.*—E. H——, aged sixteen months, a weakly-looking boy, with marked evidences of rickets, was brought to the hospital on account of difficulty in passing urine. The mother had noticed this three months previously, when she also observed that the straining gave rise to prolapsus ani. A doctor had attended the child during this period on account of wasting and diarrhœa. A fortnight before admission the boy did not pass any urine from 8 P.M. one evening until 9 A.M. the following morning, during which time he was in great pain, screaming violently, and straining. This was relieved by a doctor who passed a catheter, at the end of which, on its withdrawal, a small piece of hard substance, about the size of a pea, was brought away, and another similar piece was passed by the child a little later; this was whitish and hard, and crumbled away when exposed. After this he was better, but screamed when passing urine. No blood was observed in the urine. He was sounded under the influence of chloroform, and a stone detected, which appeared to be of considerable size, but not readily movable in the bladder. Here was a set of circumstances in which lithotrity could not be entertained; the large size of the stone, its immobility, together with the small calibre of the urethra and the very feeble condition of the child, all tended to put such a suggestion out of court. Again, the very narrow orifice of the pelvis, which was deformed by rickets, did not promise success to the lateral operation if performed, especially considering the presumed size of the calculus. It was accordingly decided to perform the suprapubic operation, and this was done according to the method now in vogue on June 11th, the bladder having been emptied and then injected with boracic solution, and the rectum distended by an indiarubber cone. Upon opening the bladder, which was devoid of all peri-visceral fat, the left forefinger was inserted, and the stone was felt lying in a sacculus in the region of the trigone below and between the orifices of the ureters, surrounded and overlapped by the mucous membrane of the bladder to such an extent that it became necessary to raise the calculus from below by the assistance of the right forefinger inserted into the rectum. By this means it was easily freed and pushed into the cavity of the bladder, where it was grasped and removed by a pair of forceps. The stone was conical in shape, the base which lay uppermost being nearly flat, whilst the cone lay deeply embedded in a sac of mucous membrane. It was composed of uric acid, with a crust of phosphatic material, and measured seven-eighths of an inch from base to apex, the weight being fifty-three grains. No sutures were applied to the bladder wall, but a small piece of catheter was inserted and allowed to project from the lower part of the abdominal wound, which was brought together above this point by three sutures of catgut. Next morning a small shell of phosphatic covering of the stone was found under the protective. The temperature was normal, and some urine was passed per urethram, as happened also upon the following day. On the third day following the operation almost all the urine passed by the proper channel, and from this date until his discharge at the end of a fortnight there was no interruption to perfect recovery.

CASE 2. *Lithotrity in a boy aged three years and three months; recovery.*—F. B——, who had been suckled for a year, was noticed to have pain in passing his urine in February last, after a severe attack of bronchitis. In the following May he was circumcised at another hospital, but was taken to Great Ormond-street, on account of the frequency with which he passed urine. The passing of motions caused him to cry, and the stools contained slime and worms. He occasionally woke at night to pass urine. He was admitted and sounded, and a fair-sized stone was detected. On July 13th, the patient being under the influence of chloroform, the meatus having been slit to a small extent, Mr. Morgan introduced one of Weiss's lithotrites of No. 7 English scale, and, after breaking up the calculus, washed out the bladder with the evacuator described by him in THE LANCET (Sept. 2nd, 1882), and using a tube of the calibre of a No. 8 catheter. The lithotrite was introduced three times, the third time for the purpose of sounding only, and the bladder was washed out four times. No further fragments being found, the child was sent back to bed. No difficulty whatever was found in introducing either the lithotrite or the tube of the evacuator once the meatus had been passed. The fragments of stone collected weighed forty-one grains and a half. For the next two days the boy suffered no pain; the urine was passed naturally and without pain, and on examination was found to be acid, with a small amount of albumen, the sediment containing pus and epithelium cells. On the third day two small fragments of stone were passed with the urine, which weighed about one grain. On the sixth day there was much pain in micturating, and frequent desire to pass urine. This soon subsided under treatment, but no more fragments were passed. Ten days after the operation the patient was sounded carefully under an anæsthetic, and the bladder washed out with warm water. No more fragments of stone were found, and on July 25th he was discharged from the hospital, eleven days after the operation, and he has since that time remained perfectly well.

Remarks by Mr. MORGAN.—This case is interesting from being the first in which, at the Hospital for Sick Children, a boy of such early age has undergone the operation of lithotrity, and the ease of its performance and the successful result point to its adoption in similar well-suited cases. At the same time, the case which precedes it shows that lithotomy in some form cannot be abandoned in certain circumstances, though how far the supra-pubic will supplant the older lateral operation still remains to be seen.

GREAT NORTHERN CENTRAL HOSPITAL.

DISEASE OF THE HIP-JOINT; EXCISION OF THE HEAD OF THE FEMUR; SUBSEQUENT REMOVAL OF THE GREAT TROCHANTER; GOOD RESULT.

(Under the care of Mr. W. SPENCER WATSON.)

WE are indebted for the notes of the case to Mr. Strugnell, house-surgeon.

Lavinia D——, aged seventeen years, had suffered from the usual symptoms of hip-joint disease on the left side since the age of five years. Successive abscesses had formed, and the joint had become painful, with nocturnal startings, sleeplessness, and hectic. There was no movement of the joint, and a shortening of an inch. Weight extension and rest were tried from Dec. 20th, 1884 (the date of admission) to May 20th, 1885. At first the relief experienced by the extension was very great, but the pain and all the other symptoms were soon as great as ever, and on May 20th the head of the left femur was excised, leaving the trochanter and shaft untouched. The head was entirely denuded of cartilage, and presented an eroded and wasted surface; the cartilage of the acetabulum was ulcerated, but, there being bare bone, it was not scraped or otherwise interfered with. The wound was dressed antiseptically, and both lower limbs put up into a Bryant's splint, which, however, was exchanged on May 24th for an interrupted Liston's splint, with weight extension. On June 1st the wound had healed, with the exception of a small sinus. There were no other symptoms of note, and on July 18th a Thomas's splint was applied, and on Aug. 22nd the girl was allowed to get up and go about on crutches. She was discharged on Sept. 19th, there being still a slight discharge from a small sinus, but the limb was movable at the hip to the extent of 30° from the perpendicular axis.

In November the girl was readmitted and complained of severe pain. The still discharging sinus was reopened and the cavity of the joint explored with the finger. No bare bone was felt, but the great trochanter was found to be drawn up with great force over the edge of the acetabulum by the muscles attached to it; and it was thought that this continual muscular action was the cause of the constant pain complained of by the patient. On Feb. 13th, 1886, the wound was freely opened and the great trochanter sawn off. The small trochanter and the muscles attached to it were not interfered with. The progress of the case after this last operation was satisfactory but slow, and with intercurrent attacks of severe pain and rise of temperature; but in the autumn of 1886 the sinuses had all healed and left a movable sound joint, with very moderate amount of shortening.

On March 20th the patient came to the hospital on

crutches, looking much stronger and better. She was now able to walk for a few steps without crutches.

May 4th.—Has been in hospital again with a small superficial abscess in the inner aspect of the thigh, which was opened and has now healed. The condition of the joint is still quite satisfactory.

Remarks.—The operation of removing the head of the bone without the trochanters seemed to be likely to succeed in this case, as the disease was strictly confined to the head and acetabulum. The pain, however, due to the spasmodic action of the muscles on the great trochanter was so great that it was necessary, after all, to remove this process of bone. The operation being a larger one, and exposing the cancelli of the shaft, is probably a more dangerous one, and it would be well if we could by some means avoid it without exposing the patient to the risk of the pain due to muscular action afterwards. It would be desirable to divide the muscles attached to the trochanter only, and leave the bone untouched. The difficulties of the case were aggravated by the extremely irritable and hysterical temperament of the patient, and the want of sleep associated with this temperament. Mr. W. Adams' osteotomy saw was used for the purpose of removing the head of the bone in the first operation, and the difficulties of the section of the neck would have been insuperable without this instrument.

BRISTOL GENERAL HOSPITAL.

A CASE OF SUPRA-PUBIC LITHOTOMY, AND ONE OF SUPRA-VAGINAL HYSTERECTOMY.

(Under the care of Mr. NELSON DOBSON.)

Supra-pubic lithotomy.—A man, aged fifty-one, looking older than his age, was operated on by the supra-pubic method on September 3rd. The case is interesting from several circumstances, but chiefly because he had been twice operated upon by Mr. Dobson in six months for stone in the bladder; on the first occasion by the lateral method, and on the second by Peterson's method. The patient was very intelligent, and with his experience of both operations he gave a preference to the supra-pubic as having given him more freedom from discomfort after the operation; but unfortunately, as the rectum was wounded in the lateral operation, he experienced more uneasiness than is usual after this operation, and therefore his comparisons between the two operations to which he was subjected are scarcely fair tests of their relative merits.

This patient first came under Mr. Dobson's care in March, 1886. He was a highly nervous, sensitive man; had had for a long period difficulty in passing urine, pain (very acute) accompanying and following micturition. He said that he had a stricture at the orifice of the urethra, for which he had lately been under the care of two surgeons. He was told that he possibly had stone in addition to his other troubles. Chloroform was given, and a narrow, very unyielding stricture of the urethra, commencing at the orifice and extending down the urethra for an inch, was found; also, on sounding, a stone, which appeared to be of fair size, and gave the impression of being phosphatic. It was attempted to dilate his urethra with a view to crushing; but it would not dilate beyond about No. 5 sound; therefore, as his sufferings were very considerable, on March 5th, having introduced a No. 5 staff, lateral lithotomy was performed. On introducing the finger, Mr. Dobson felt a round smooth stone about the size of a large walnut. The forceps were passed and the stone grasped very lightly, and the operator prepared to extract, when the forceps appeared suddenly to have lost grasp of the stone. Search was again made for a few moments for the stone with the forceps, but, failing to find it, the finger was introduced and discovered the bladder strewn with a crumbled phosphatic stone. The débris was removed by the scoop and frequent washings. The weight of the recovered fragments was 125 gr., but as much again was lost in the washings. There was no evidence of wound of the rectum; but on March 8th, an aperient having been given and the bowels moved, fæces were noticed in the perineal wound. This wound was examined with the finger, and an opening found in the rectum. On the 10th the perineal and rectal wounds were laid into one by cutting through the sphincter. On April 27th all had healed except a small rectal fistula; and by June 1st the fistula had quite healed.

On Sept. 3rd the man came again to the hospital with the old symptoms of cystitis and pain stricture still tight, but improved; the pain and constitutional disturbance severe. On sounding, a calculus was found. Having regard to the condition of his urethra at the meatus, and low down in the perineum, Mr. Dobson decided to perform supra-pubic lithotomy; this was done on Sept. 3rd, and a small irregular phosphatic calculus removed. The rectum was distended by means of Peterson's bag with 13½ oz. of water, and the bladder with 12 oz. of warm boracic acid lotion. There were no difficulties of any kind. A catheter was placed in the bladder, and a large drainage tube in the wound. Next day the drainage tube was removed, and on the 8th the catheter was also permanently removed. On the 27th the wound was nearly, but not quite, healed. In a few days later he left the hospital quite well, and has not since been seen. He complained very little of the discomfort of the second operation, but was somewhat envious of a patient in a bed opposite to him, from whom several fragments of stone had been removed by the median operation thirteen days later, and who was quite well before him; this last patient had been subjected to litholapaxy by Mr. Dobson and others on more than one occasion, who had felt compelled to cut him in consequence of the evacuator being broken just as he was about to crush him once more.

Remarks by Mr. DOBSON.—The advantage of the supra-pubic operation in this case was greater than usual, because it enabled me to overcome all the urethral difficulties, and to be quite sure by inspection that I had thoroughly emptied the bladder. I would also lay stress on the importance of dividing the sphincter in all cases of accidental wound of the rectum in the lateral operation. I have done the lateral operation many times, and have, so far as I know, avoided this accident in all my previous cases. I believe when this accident does occur the proper treatment is as I have indicated, notwithstanding the divergence of opinion among the authorities.

Supra-vaginal hysterectomy for uterine myoma.—J. S——, aged forty-seven, a slim, delicate, highly neurotic single woman, was first seen in July, 1886. She had been much overworked as a governess, and in failing health for some months. She had been completely confined to bed for three weeks. She was so nervous and sensitive that only the most superficial examination could be made. The walls of the abdomen were œdematous, and the legs very œdematous from the feet to the groins. There was no albumen in the urine, the temperature was normal, her pulse feeble and rapid, and she was much emaciated. A large solid tumour occupied the centre and left side of the abdomen, stretching from the pelvis to the diaphragm, smooth, and apparently movable as far as her tenderness would allow. Vaginal examination only indicated normal conditions so far as the finger could reach; the uterine sound was never used. There was no evidence of fluid in the abdomen, nothing to be noticed on auscultation; but a distinct pulsation was communicated to the hand laid gently on the abdomen, which pulsation was transmitted from the aorta; the percussion notes those of a solid (probably uterine tumour). Mr. Dobson gave a decided opinion against operation, thinking from her general condition she had only a very short time to live, and also that the tumour was malignant. When seen again in December her condition was much the same as before, though somewhat improved; she had now for more than seven months been completely confined to bed, and was anxious to have her tumour, which at this time was thought to be a myoma of the uterus, removed. This was done at the hospital on Jan. 17th, 1887. She still continued to menstruate, had just passed her period, and never suffered excess or any irregularities. Chloroform being administered, a four-inch incision was made and the nature of the tumour ascertained. The incision was then carried rapidly through and beyond the umbilicus; the uterus turned out with its tumour; and, as the right broad ligament was very expanded and difficult to surround with the serre-nœud, it was ligatured in two parts, but the ligatures when applied shrunk the broad ligament sufficiently to enable the serre-nœud to be passed behind, and this was rendered more easy as the left ligament was of abnormal size. Having passed the pin through the centre of the pedicle, and having also dissected off from the front of the tumour the bladder, which was very closely connected at this point, a pedicle was left as thick as the wrist. The pelvis was then packed with sponges, and the mass cut off above the central line and closely trimmed. About a pound of blood escaped from the tumour, but none found its way into the abdomen. The tumour, which was mostly intramural and growing from the fundus, weighed seven

pounds. The cavity of the uterus was not enlarged. The abdominal wound was closed with twenty-five silk stitches, and the operation was done under the spray, with Listerian precautions. The serre-nœud came away on the fourteenth day. The temperature never exceeded 99°, and the patient left for home in six weeks, able to sit up, and, though still somewhat an invalid, much improved in general health. Though the tumour was not large by weight as such tumours go, yet it was relatively large both in appearance and effects in this very fragile and slim person.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Lymphadenoma.—Congenital Umbilical Hernia.—Carcinoma of Pancreas and Semilunar Ganglia.—Guttural Pouches of Horses.—Dilatation of Œsophagus.—Myxoma of Skull.—Aneurysmal Varix.—Rectal Polypus.

THE first meeting of the winter session of this Society was held on Tuesday last, Dr. J. Syer Bristowe, F.R.S., Vice-President, in the chair.

Dr. HADDEN showed specimens of Lymphadenoma, in which the intestinal glands were extensively affected. The patient was a man aged fifty-four, who had suffered for several months from abdominal tumour. He had effusion into the serous cavities and enlargement of the spleen. The abdomen was tapped twice, and the fluid withdrawn was milky, as in chylous ascites. Before death pus formed in the anterior chamber of the eye. The temperature was usually normal, and nothing special was noted about the stools at the necropsy. The abdominal tumour was found to arise in enlargement of the mesenteric and retro-peritoneal glands. All the lymphatic glands of the body were enlarged, and secondary growths were seen in several organs, especially in the spleen, which was much enlarged. The glands of the small and large intestine, agminated as well as solitary, were enormously enlarged; but the coats of the intestine were not infiltrated, as in the recorded cases of Dr. Murchison and Dr. Coupland. The author directed attention to the milky nature of the effusion in the serous cavities, and suggested that it might be due to the same cause as a chylous ascites.—Dr. BRISTOWE remarked that the enlargement of the lymphoid tissues was remarkable in being limited to the glands and not invading the parietes, as in Dr. Coupland's and others' specimens.

Mr. D'ARCY POWER showed specimen and drawings of Congenital Umbilical Hernia. He was indebted to Mr. J. J. de Zouche Marshall of Lamberhurst for the history. The mother of the child, born at full term, is a healthy young woman. The hernia was discovered as a transparent sac containing several coils of small intestine, situated in the umbilical cord at the part nearest to the child's abdomen. The cord was ligatured and divided in the usual manner, and an ineffectual attempt was then made to get back the bowel through the umbilical opening. After gentle taxis for ten minutes without success, the sac was carefully opened on a director, and as the gut could not yet be returned the umbilical ring was enlarged. About a foot of the intestine was then with some difficulty returned into the abdomen. The edges of the ring and of the wound were next brought together with silver wire and carbolic dressing, the whole being supported with lead plaster and a bandage. The child died at the end of three days of peritonitis. Antonio Scarpa and Sir William Lawrence in their treatises on ruptures had given a complete description of this hernia. Usually this malformation was accompanied by spina bifida. The tumour appeared to be formed by a dilatation of the coverings of that portion of the umbilical cord which was nearest to the body of the child. It had a fusiform shape, with the main constituents of the funis running as a bundle along its lower border, the umbilical cord again appearing at the distal apex of the swelling. The external surface was polished, and closely resembled the outer surface of a cord; whilst internally the sac was covered with a smooth layer, which was apparently derived from the peritoneum. It contained about a foot of small intestine, and at a short distance beyond the tumour was a second small sac filled with a viscid fluid.—Mr. R. J. GODLEE had seen two cases of hernia into the base of the umbilical cord; the outer surface of the tumour becomes dried into caky brown masses. In one case strangulation necessitated operation, but the patient died shortly, as the other did, without operation.—Mr. F. TREVES had had five cases under his own care. Twenty cases had been recorded, and the majority were covered by thick tissues and surrounded by a substantial sac. In a few instances the sac wall was very thin. Imperfect closure of the visceral plates was the chief cause of the hernia. If not the cæcum, then a Meckel's diverticulum was the most likely constituent of the hernia. The bulk of cases require immediate operation, for the skin over it becomes dry and inflamed. It would be wiser to lay open the sac, reduce the contents, and bring the edges together. In nearly all the reported cases of this variety there was no other deformity.

Dr. HALE WHITE showed Microscopic Sections of the Semilunar Ganglia which had been invaded by scirrhus spreading in from the pancreas. The patient was a woman aged fifty-four, whose only important symptoms during life were a vague abdominal pain, wasting, and vomiting. The growth was situated in the centre of the pancreas, both head and tail being free. A portion of the jejunum was bound down to the pancreas, and thus partially constricted. The nerve cells in the ganglia were granular and slightly pigmented. The cancer had spread along the bundles of nerve fibres in the semilunar ganglia, so that sometimes a bundle of nerve fibres would be replaced by a tube of cancer cells, bound in by the dense fibrous tissue surrounding the nerve fibres. The vomiting might well be explained by the constriction of the intestine and the wasting and the vomiting, so that we had two organs, the pancreas and the semilunar ganglia, both affected by growth, and yet no symptoms were produced that could with certainty be attributed to their implication. Dr. Hale White thought this case supported his view advanced in the *Journal of Physiology*, that the semilunar ganglia were organs which in us were dying out both physiologically and structurally. It was to be noticed that here the nerve cells were not more granular than they frequently are in individuals in whom no disease of the ganglia is known to exist.

Mr. BLAND SUTTON showed specimens of Guttural Pouches of Horses. In these animals the Eustachian tubes formed large sacs, and might be so large as to hold six or seven ounces of plaster, and they take up the space in the horse which corresponds to the pharynx of man. They communicate by means of a narrow valvular orifice with the posterior nasal passages. Some suppose that they substitute the function of the mastoid cells, which are ill developed. The sacs are very liable to inflammation, and the narrow orifice causes the secretions to be retained; suppuration may occur, and necessitate operation of letting out the pus through the skin, which they distend between the styloid process and the lower jaw.—Dr. COUPLAND asked whether these concretions had been microscopically examined, for they might be formed on a basis of grass or other foreign body.—Mr. F. TREVES asked whether the fossa of Rosenmüller had any relation to the guttural pouches of horses.—Mr. SUTTON, in reply, believed that Dr. Coupland's suggestion might be a true explanation, and he agreed with Mr. Treves that the pouches might arise as dilatations of the Rosenmüller fossa.

Dr. HANDFORD showed a specimen of Dilatation of the Œsophagus taken from the body of a man aged fifty-two, who had suffered for more than five years from regurgitation of food. This occurred many times daily; sometimes immediately after meals, occasionally half an hour or an hour after. He was at the same time suffering from advanced heart and vascular disease, of which he died six days after admission into the Nottingham General Hospital. At the necropsy the heart was found much enlarged, the aortic valves incompetent, and the aorta enormously dilated. This dilatation affected the whole of the thoracic aorta, but was much diminished at the lower part. The œsophagus was very markedly dilated throughout its whole length, except at its passage through the diaphragm, where it was constricted to very slightly less than the normal size, but there was no induration or sign of stricture; it contained several ounces of undigested food. After being opened and preserved for several months in spirit, its greatest width was three inches and a half. Just above the cardiac orifice it was one inch and three-quarters. Microscopic sections were examined, but no very marked changes were found. There was no disease of the stomach. Dr. Handford thought it possible that the dilated aorta in its passage through the diaphragm

might have pressed the œsophagus against the central tendon, and so interfered with the free passage of food. Other possible causes were general muscular atrophy, as in the cases recorded by Klebs and Luschka, or disease of the vagus. Dr. Handford did not consider it a case of simple congenital stenosis.—Dr. BRISTOWE referred to a case which showed symptoms only three months before death, and probably due to mere catarrhal or inflammatory changes; at least, there was no stricture. Was the condition recognised during life? The answer to this was in the negative.

Dr. JACOB of Leeds showed a specimen of Myxoma of the Skull. During life the man exhibited an enlargement of the skull. There was but little inflammatory condition. Under the microscope there was only myxomatous structure, and not of the syphilitic type. There was a large overgrowth of the calvaria in the parietal region, and apparently chiefly of the diploë. The specimen was referred to the Morbid Growths Committee.

Dr. A. ROBINSON showed an Aneurysmal Varix taken from the amputated stump of a man aged thirty-two, who had had his leg amputated sixteen years previously through the upper third. There had been much pain in the stump since a blow which it had received two weeks before he was seen, when expansile pulsation was discovered. The aneurysm, the size of a small orange, was excised, and the varicose veins were removed from the soft posterior part of the stump.

Mr. MARMADUKE SHIELD exhibited a Villous Polypus of the Rectum, removed from a woman who had suffered for eight years from syphilitic disease of this part. The growth used to prolapse from the anus. It was a lobulated and foliaceous pediculated growth, recalling the appearance of a pancreas. The tumours were somewhat rare. They did not infiltrate the rectal wall, and rarely if ever recurred.

The following card specimens were exhibited:—Mr. F. S. Eve: Part of an ancient Egyptian Skull affected with Osteoporosis. Mr. P. D. Turner, for Mr. Christopher Heath: Villous Tumour of Bladder and Surgical Kidneys. Dr. H. A. Lediard (Carlisle): (1) Melanotic Sarcoma growing from the Edge of the Nail of Index Finger; (2) Sarcoma of Palate in an Otter Hound; (3) Large Subcutaneous Nævus from the Parotid Region.

CLINICAL SOCIETY OF LONDON.

Pemphigus; Arsenical Pigmentation; Unusual affection of Cicatrix.—Recovery from Bullet Wound of Liver.—Pulmonary Arterial Reflux.—Cephalhæmatoma over Right Parietal Bone.

THE first meeting of the winter session of this Society was held on the 14th inst., Dr. W. H. Broadbent, F.R.C.P., President, in the chair.

DR. HANDFORD reported a case of Pemphigus occurring in a child, aged thirteen, and terminating in incomplete recovery after nearly a year. The limbs, trunk (except parts of chest and abdomen), face tongue, mouth, pharynx, mucous membrane of nose, conjunctivæ, and orifice of the vagina were all affected. The eruption came out in crops, and was accompanied by rise of temperature. Micro-organisms were found in the bullæ which contained pus, but not in those which contained serum. Quinine in large doses was given with benefit, and arsenic. Of the latter fifteen-minim doses of Fowler's solution were given thrice daily, and continued for ten weeks. After this, the skin of the whole body was noticed to be dry, brawny, and darkened in colour. The axillæ, groins, and abdomen were almost as dark as in Addison's disease. The skin looked dirty, but the colour was proved to be due to pigment—deposited chiefly in the rete, but partly in the more superficial epithelium. The arsenic was stopped, and the patient treated by wet-packing, and in a month the skin had resumed its normal, smooth, moist appearance, and much of the pigmentation had disappeared. Also on the hands and feet there were many elongated patches of cicatricial-looking skin, thickened and elevated. These patches were covered with white points, like millet seeds, just beneath the epithelium, and resembling to the naked eye miliary tubercles. They were not tubercular, but consisted of accumulations of degenerating epithelial cells in the deeper part of the epidermis. They disappeared in four or five months. It is possible that this condition also was due to the arsenic. Several coloured drawings and photographs illustrating these conditions were exhibited. A third case of pemphigus was described, in which there was some ground for suspecting implication of the mucous membrane of the intestinal canal. It presented also the atrophied glossy condition of the skin of the hands mentioned in the first case, and which is so suggestive of an implication of the peripheral nerves. No definite affection of sensation or of the reflexes, however, could be discovered, though reference was made to the statement of Dr. Pasquale Ferraro that he had found advanced changes of an atrophic degenerative nature in the posterior horns of the dorsal spinal cord, and also in the peripheral nerves, the ganglia on the posterior nerve roots, and in the sympathetic ganglia. Two further instances of arsenical pigmentation were narrated, and the opinion was expressed that small doses of arsenic (five to ten minims of the liq. arsenicalis) repeated thrice daily for about two months were capable of producing a pigmentation of the skin, chiefly of the abdomen, lower part of the chest, lumbar region of the back, axillæ, groins, and inner part of the thighs. This condition was not necessarily accompanied by roughness and dryness of the skin and disappeared slowly in from one to four months, or rather longer.—Dr. RADCLIFFE CROCKER had seen white spots or specks in one case of pemphigus in the Great Ormond-street Hospital for Sick children; their probable nature was the same as that of milium. He had frequently seen pigmentation follow the use of arsenic even in cases of chorea as well as of recurrent bullous erythema. The pigmentation appeared to be due to an actual deposition of the metallic arsenic chiefly in the deeper layers of the epithelium; the duration of this pigmentation varied from not less than four to even as long as twelve months and perhaps longer. He could not agree that the photographs handed round were representations of pemphigus foliaceus, which is absolutely universal and consists in a continuous eruption of flaccid bullæ.—Dr. GOODHART was interested in the occurrence of high fever in pemphigus, which appeared to be independent of the eruption, and perhaps depended on individual peculiarity or some general condition of body. Pemphigus was undoubtedly controlled by arsenic, but large doses might be required to effect this control, even as much as eighteen to twenty-two minims three times a day. He had also witnessed marked pigmentation frequently as the result of the administration of arsenic.—Sir DYCE DUCKWORTH testified to the value of arsenic in pemphigus, and had seen cases completely cured by its employment though large doses might be required and pigmentation result.

Dr. LEDIARD read a paper on a case of Bullet Wound of the Liver. The case was one in which a constable was shot through the body, at a short distance, whilst pursuing some burglars. The bullet entered the right side of the chest, between the seventh and eighth ribs, a little to the outer side of the mammary line. Deep collapse resulted, during which the bullet was extracted from the right loin, just over the last rib, and two inches from the spine. It is believed that the constable was leaning forward to catch a man in front of him when he received his wound. Jaundice supervened, and on the ninth day the extraction wound in the back discharged a large amount of bile-stained fluid, and continued to do so to a less extent for some weeks. Evidence of air in the right pleural cavity to a limited area was also present, and subsequently an empyema formed and discharged freely a large amount of pus through the bronchi. Elevation of temperature lasted more or less for fifty-eight days, but at the end of three months the patient was convalescent, and has made a complete recovery, being still in the Cumberland police. The course of the bullet was probably through the convex surface of the liver, the diaphragm being perforated twice, and the lung grazed. The presence of bile was ascertained by chemical tests, corroborated by Dr. Walker, of Newcastle, public analyst for Carlisle. The microscope also gave clear evidence of a wound of the liver tissue. The bullet was a large one, and weighed three drachms and a half.

Sir DYCE DUCKWORTH read a paper on a case of Pulmonary Arterial Reflux. The patient was a man aged forty-nine, invalided from the police on account of short-windedness and cough. He came first under care at St. Bartholomew's Hospital in March, 1884, with a history of winter cough for five or six years. He had suffered from several attacks of gout in the feet. He had taken rather freely of beer and rum. His father was a gouty man, and died paralysed at the age of sixty. There was no history of syphilis. His complexion was then dusky, and the chest barrel-shaped.

There was an increased area of cardiac dulness. At the apex, which was felt in the sixth space in the left nipple line, was a fairly natural first sound and a faint distant murmur. A clear second sound was also heard here. Above the apex and over the whole præcordia a diastolic murmur was heard, loudest over the aortic area. The pulse was jerky and not quite regular. The legs were œdematous. There was no albuminuria. Signs of general bronchitis in the lungs. On one occasion he spat two ounces of dark blood mixed with mucus. The case was regarded as one of "morbus cordis," aortic regurgitation, chronic bronchitis, and emphysema. In November 1885 the patient returned to the hospital under the care of Dr. Gee, suffering from aggravated bronchitis and orthopnœa. The heart's apex was impalpable, and cardia dulness was absent. A diastolic murmur was heard all over the præcordia, loudest over lower end of sternum. The pulse was irregular, 50 per minute, of fair volume and not jerky. The urine contained a trace of albumen. His board was headed, "Aortic regurgitation, with cough and gout." After two weeks he went out relieved. His third admission was to the John ward, in January, 1887, under Sir Dyce Duckworth. The patient was then very dusky, bloated, and dropsical. The jugular veins were turgid. There was much bronchitis, and very little urine was passed. The latter contained one-sixth of albumen. There was orthopnœa and much flatulent distension of the abdomen. Cardiac impulse was felt in the fifth space, half an inch inside the left nipple line. Very limited dulness was made out on percussion. There was epigastric pulsation. At the apex a systolic murmur was heard, also in the axilla or lower angle of left scapula. A diastolic murmur was audible at the apex and base, loudest down the sternum. It was particularly noticed that the sound was defective in the area of the pulmonary artery. The pulse was 78 per minute, irregular in form and volume, and of increased tension. No collapsing or "aortic" quality was noted. Much bronchitis and emphysema. The liver was enlarged. Throughout there was a subnormal temperature. The sputum was copious, not aerated, viscid, and dirty greenish-yellow in colour. An attack of gout occurred in the left great toe and instep. Treatment proved of little relief. Increasing cardiac dilatation and œdema of the lungs supervened. Sphygmographic tracings of the pulse were taken with several instruments, and gave no indication of aortic reflux. The patient lingered, slowly failing, till March 6th. At the necropsy the lungs were found emphysematous and œdematous. Pericardium natural. Heart very large, with much dilatation, especially of right ventricle. The mitral and tricuspid orifices were dilated. The aortic valves were natural. The pulmonary valves were two in number, one large one with much thickened edges, and one smaller one with similarly thickened edges. Between the two was a vacant space showing some roughening at the site where a third valve should have existed. Below this was an aneurysmal pouch which would have held a large hazel nut. The ventricular septum was complete. The viscera showed the usual signs of long-continued obstructive cardiac disease. The heart and a drawing of the parts in a recent state were exhibited. It was probable that this was a case of congenital disease of the pulmonary valves, the heart's valves only failing in middle life. Sir Dyce Duckworth remarked that it was perhaps hardly creditable that a correct diagnosis was not made in this case. He had, however, once made a diagnosis of pulmonary regurgitation, which at the necropsy turned out to be aortic reflux, and was thereby made cautious. The physical signs of aortic regurgitation were sometimes more plain in the area of the pulmonary artery, and the most careful auscultators would probably always be cautious in making a diagnosis in these very rare cases. The sphygmograph would perhaps be of the best avail in supporting a suspicion of the disease in any doubtful case.—Dr. BROADBENT considered that a better diagnosis during life could not have been made, and he should certainly have suggested the presence of aneurysm. He asked for further particulars as to the anatomy of the aneurysm of the pulmonary artery.—In reply to Dr. Coupland, Sir DYCE DUCKWORTH said that he could not remember whether the cardiac second sound was heard in the carotid artery or not.—Dr. DOUGLAS POWELL agreed that diagnosis could not be made with certainty, and he said there was difficulty in discovering regurgitation from the arteries in some cases of mitral stenosis.

Mr. TREVES gave an account of a case of Cephalhæmatoma over the Right Parietal Bone in a boy aged eleven. The cyst formed an enormous tumour that projected some two inches from the surface of the skull; it was surrounded by a wall of thick bone. The cyst was the result of a fall upon the head when the child was six months of age. Mr. Treves described the formation of these cysts in the newly born. The present case is rare, as showing a cephalhæmatoma, the result of injury, that had formed a permanent tumour. It was of interest also in showing that the bone, that is so common about these cysts, had not undergone absorption. So far as reported examples and museum specimens go, the present case would appear to be unique. No treatment was proposed.

MEDICAL SOCIETY OF LONDON.

Psychology of Joking.—Simple Dilatation of the Stomach.

THE first ordinary meeting of the 114th session of this Society took place on Monday, Oct. 17th, 1887.

An introductory address was delivered by the President Dr. HUGHLINGS JACKSON, on the Psychology of Joking; a report of which will be found in another part of our present issue.

Dr. CLIFFORD ALLBUTT read a communication on Simple Dilatation of the Stomach. He pointed out that simple gastro-ectasis, both acute and chronic, and independent of pyloric obstruction, was often overlooked; that indeed many physicians have been disposed to ignore it in an uncomplicated form. Since the publication of his first paper on the subject in 1879 (which was based on an increasing experience from the date of Kussmaul's well-known essay in 1869) he had added greatly to his cases and notes, but he feared with few new results. He found, however, that the malady was not uncommon in advanced stages, and common enough in lesser degrees, both in acute and chronic forms. He urged the great importance of diagnosing the disease, whether as a complication of febrile or debilitating illness, or as a result of prolonged gastric derangement, and as a malady to which infants, youths, and adults were all liable. Without diagnosis proper treatment could not be employed, and such diseases as phthisis thus complicated must go from bad to worse, if not specially treated. In infancy and early childhood this malady might seriously impair nutrition. The more important symptoms of gastro-ectasis in children and adults were briefly discussed, and also the relations of gastro-ectasis to gastric catarrh. The influence of chronic diseases and of gross or injurious habits of feeding in inducing dilatation were next indicated, the results of some of these habits being to produce only the lesser degrees of dilatation; also the influence of general or local nerve failure in allowing ectasis to occur was considered. That gastro-ectasis was commonly associated with great nervous irritability and depression, whether as cause or effect, was undoubted, as was the association of vast and transient distensions with hysteria in women, though in this sex permanent gastro-ectasis was less common than in men. Although fully developed dilatation was not difficult to diagnose, and even to measure, yet lesser degrees required more care and were more difficult. Succussion might not infrequently be obtained in stomachs presumably of normal dimensions, and in some cases the whole stomach might be displaced downwards; therefore, in acute cases especially, the upper stomach boundary should be carefully noted. For treatment washing out was urged as the essential basis of all success, whether for relief or cure. The action of the stomach syphon upon the dilated stomach was to be compared to that of the catheter upon the enfeebled bladder, the mischief in both instances being perpetuated by the retention of decomposed matters in the cavity.—Dr. STEPHEN MACKENZIE advocated the use of Leiter's funnel and tube for washing out the stomach.—Dr. HABERSHON suggested that those cases of dilatation associated with phthisis were probably due to lesion of the pneumogastric nerve. In addition to washing out the stomach, he was in the habit of prescribing carbolic acid and hyposulphite of soda to prevent fermentation.—Dr. C. J. HARE considered an emetic a most valuable remedy in cases of moderate dilatation.—Dr. THEODORE WILLIAMS suggested that these cases should be treated by rectal alimentation in order to ensure rest to the overworked stomach.—Dr. LAUDER BRUNTON thought that in some cases the dilatation was of careful reflex nervous origin. He insisted on the importance of dietetic and medicinal, in addition to mechanical, treatment.

Reviews and Notices of Books.

Elements of Pharmacology. By Dr. OSWALD SCHMIEDEBERG. Translated by THOMAS DIXSON, M.B. Pp. 223. Edinburgh: Young J. Pentland. 1887.

SCHMIEDEBERG'S views have recently been so largely quoted that we are glad to welcome an English edition of his "Elements of Pharmacology." It is a book of a peculiar type. It is intended to serve as a pharmacological commentary on the second edition of the German Pharmacopœia, and thus occasionally deals with substances not recognised as official in the British Pharmacopœia. The author's plan has been, not to give directions for the treatment of disease, but to describe the actions of powerful agents, to characterise the consequences which may affect the entire organism, and "from pharmacological facts to formulate general rules for the employment of remedies." The precise meaning the author assigns to the term *pharmacology* is the study of the changes in general which are caused in the living organism by chemically active substances, whether these substances are used for remedial purposes or not. This definition is broad enough to include numerous active substances for which at present no therapeutic values are claimed. Indeed, it is suggested, probably correctly, that when a remedy has fallen out of therapeutic use, subsequent experimental researches may prove of value in indicating the advisability of its employment in some totally new directions. Waves of fashion may take up and toss aside new remedies without realising their value, but the pharmacologist working laboriously and methodically may yet find unsuspected treasures in them. Cocaine, in its application as a local anæsthetic, is sufficient proof of the truth of this idea, its value and employment as a tonic having been completely overshadowed as soon as its local effects were discovered.

The introduction is brightly written, although it deals with definitions, with the nature of pharmacological actions, the sources of therapeutics, the choice of remedies upon rational principles, and the classification of pharmacological substances and of remedies. The semi-historical considerations of the sources of therapeutics are written in a light vein of sarcasm, indicating the author's contempt for all that has preceded what he regards as a rational system of therapeutics based upon pharmacological researches. On the other hand, his nationality might be guessed from the gravity with which he asserts that "distilled water, when taken as a drink, does not act as a poison simply because it is changed into a harmless form immediately after its absorption, through mixing with the substances dissolved in the blood and fluids of the tissues." To this idea he reverts later on when (p. 115) he tells us, "Water as such never comes into contact with the living tissue, but becomes transformed into a solution while it is still in the stomach; at all events, it only enters the blood in this form." The introduction is followed by a long chapter on nerve and muscle poisons. This is divided into sections of very unequal length and value; of the strychnine group it may be sufficient to say that we are furnished with a concise *résumé* which does not add materially to our knowledge. The curara group similarly is disappointing in being silent, or almost so, concerning other substances having like properties. In small type we are informed that "many *ammonium bases* cause, along with other actions, a paralysis of the ends of the motor nerves, just as curara does. Whether one or other can replace curara further investigations alone can show." In fact, here we find the key-note of the book. The author appears to wish us to meet in his work with what is *true* rather than with what is *new*, and we may search in vain for recent statements if, in his opinion or in that of the number of younger investigators working under his guidance, the statements are not conclusively established as facts.

Morphine is dealt with at greater length and with a more satisfying result, the explanation of the supposed stimulation of the brain being very pithily expressed as "merely a matter of the disturbance and of the alteration of the equilibrium of the separate functions of the brain. The area for ideation is evidently quite intact when sensory stimuli are already beginning to lose their effect." Concerning the influence of alcohol upon the brain, the author holds that from the beginning no true stimulation can be traced. He regards the phenomena observed as merely "the results of the commencing paralysis of certain portions of the brain. In the *mental areas* the finer degrees of *observation*, *judgment*, and *reflection* are the first to disappear, while the remaining mental functions remain in a normal condition." The section upon nerve and muscle poisons necessarily includes a consideration of a very large number of important remedies. It is followed by a chapter dealing with substances which, through their molecular properties, cause alterations of various kinds at the point of application. Of aromatic and bitter stomachics he remarks that "many are quite antiquated and others quite superfluous," and he is accordingly satisfied with a somewhat bald enumeration. Succeeding chapters deal with the action of water and of saline solutions; chemical cauterisation by means of acids, halogens, and oxidising substances; the compounds of the heavy metals and aluminium as nerve poisons, muscle poisons, and escharotics; and finally, brief space is assigned to the aromatic compounds, digestive ferments and food stuffs, and to remedies acting mechanically and physically, including a consideration of the uses of plasters, ointments, poultices, and fomentations. Throughout the author exhibits a mild scepticism as to the value of purely therapeutic researches; this may perhaps be best illustrated by the following remarks upon nitrate of silver: "This neurotic drug in course of time has had to pass through *great vicissitudes*. While it was recommended most warmly by some physicians, others rejected it just as decidedly. For a time it fell even totally into oblivion, but only to appear once more. At present its use as a neurotic is again on the wane, but will probably increase again, as has always been the case."

Dr. Dixson has performed his part very satisfactorily, the English rendering being clear and idiomatic, and very rarely indeed betraying the fact of translation. Our thanks are due to him for bringing such a valuable work within the scope of a wider circle of students.

The Topographical Anatomy of the Child. By JOHNSON SYMINGTON, M.D., F.R.S.E., F.R.C.S.E., Lecturer on Anatomy, School of Medicine, Edinburgh. Edinburgh: E. and S. Livingstone. 1887.

DR. JOHNSON SYMINGTON has well filled a gap in our Topographical Anatomy. This department of anatomical science has been worked at most extensively and ably by Pirogoff, Braune, Luschka, and others in the adult; but the method of frozen sections has hitherto been systematically applied to the child, in one case only by Prof. Dwight. Dr. Symington has added to our knowledge by presenting us in this work with fourteen coloured lithographic illustrations, all life size, and thirty-three woodcuts taken from sections of male and female children, aged four years and a half, five years, six years, and thirteen years, and has given us a large number of very accurate observations on the position of the various organs and viscera, and the changes which they undergo in the earlier periods of life. The horizontal sections have been taken from a girl six years of age, whilst the vertical sections (both coronal and sagittal) are from children of both sexes and various ages. In

addition to the illustrations, the work is most valuable for excellent letterpress treating very fully and minutely of the position of structures at all periods of early life, and it is evident that many of the views generally held in regard thereto will have to undergo considerable alteration. For example, Dr. Symington shows that the external auditory meatus is relatively as long in the child as in the adult, when examined in the fresh state in subjects with the entire head frozen; that the spinal cord in the newly born child ceases at much the same point as in the adult; that the child's neck is not relatively short, but that it is higher in relation to the vertebral column than in the adult. The common assumption that the position of the stomach in the child is vertical is also shown to be erroneous, and is proved by figures taken from an infant four days old, and from the girl six years of age. The portion of the book devoted to the position of the pelvic viscera in male children is of great importance to surgeons, and will be carefully studied in view of operations on the urinary organs in early life. Too much praise cannot be bestowed upon the author for the obvious care and industry with which he has pursued his investigation, and the accuracy and fidelity with which he has reproduced its results. Its dedication to Professor Braune is a most graceful compliment to an anatomist who has done more to advance the knowledge of topographical anatomy than any other worker in this special branch. In conclusion, we must add a word of praise for the artist, Mr. J. T. Murray, and for Messrs. McLagan and Cumming, who have printed the plates.

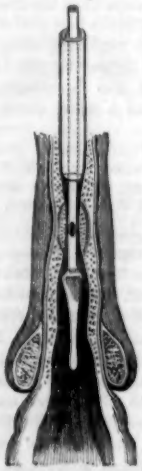
New Inventions.

NEW URETHRAL INSTRUMENTS.

THE first instrument, as represented in Figs. 1 and 2, is what I term the Compound Catheter. Outwardly, as Fig. 1 shows, this instrument is practically the same as the French gum-elastic bougie, but upon referring to Fig. 2 it will be seen that where the stricture is too tight, and will not,

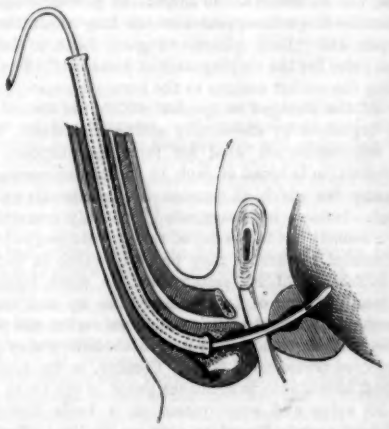
FIG. 1.

FIG. 2.



or should not, allow the whole instrument to pass, the body or dilated portion can be withdrawn, and the inner or smaller catheter passed on without fear of causing pain to the patient or injury to the mucous membrane. The next instrument, Fig. 3, I call the Catheter Guide or Conductor, and it acts in a double capacity—firstly, for protecting the mucous membrane of the urethra from unnecessary thrusts and stabs, and secondly as a stricture threader. The conductor resembles an ordinary silver bougie—flat, however, at both extremities, with slightly protruding edges; and it contains a central tube capable of admitting a No. 1 and No. 2 catheter, and this is surrounded by a number of smaller tubes for the passage of catgut or fine bougies. Let a stricture be situated where it may, a full-sized catheter can always be passed down to it; the conductor then takes the place of the catheter; this is passed as far as it will go, and its face is pressed gently against the anterior opening of the stricture, in order to dilate it; a long fine catheter, purposely made for the conductor, is then passed down the central tube, and rarely fails to pass through the stricture

FIG. 3.



on reaching it; should it fail to do so, the smaller tubes with catgut can then be worked. Even after failure with all the tubes, we may have the satisfaction of knowing the urethra has been protected from rude treatment, the mucous membrane being saved many a bruise, many a laceration. Failure, however, will not often attend the conductor, if used in a rational manner. A glance at Fig. 3 will possibly serve to illustrate its use. These instruments have been made for me by Messrs. Walters and Co., of 29, Moorgate-street, City. I venture to think that those who may be disposed to try my instruments will not be disappointed with the result. The conductor, especially in intractable cases, will be attended with marked benefit both to patient and operator. E. DISTIN-MADDICK, F.R.C.S. ED.

"A CASE OF URETHRAL CALCULUS OF UNUSUAL SIZE."

To the Editors of THE LANCET.

SIRS,—I have just received the report of the examination of this stone kindly made for me by Mr. Richard Reynolds, of Leeds. As many inquiries have been made as to the composition of the calculus, I hasten to place Mr. Reynolds' report in your hands for publication.—Yours faithfully,

Queen-street, Leeds, Oct. 17th, 1887. W. H. BROWN.

[COPY.]

Report of the Result of a Chemical Examination of a Fragment of Calculus.

"The specimen was of dirty white colour, compact, and of flinty hardness, with a conchoidal fracture. It was composed of ammonio-phosphate of magnesia, and basic phosphate of lime, and these constituents were separated, and their respective presence was determined. From the physical character it may safely be asserted that the phosphate of lime predominated, and the result of the chemical test was consistent with this view. The urine from which the calculus was deposited would doubtless have an ammoniacal character. "RICHARD REYNOLDS."

THE LANCET.

LONDON: SATURDAY, OCTOBER 22, 1887.

THE reports of the proceedings at the opening of the medical schools in the provinces show that medical education is alive there as elsewhere. At two of the provincial schools we read of new buildings in course of erection; at Sheffield Dr. SINCLAIR WHITE intimated that the munificence of his senior colleagues and the public would before another year provide a new medical school; and at Newcastle-on-Tyne Dr. HEATH, long and honourably associated with the medical school there, said that they were engaged in the erection of a new college, which they expected to be worthy of the city of Newcastle, and as handsome as the Wood Memorial Hall. Apart from such substantial indications of demand for medical education and provision for meeting it, the proceedings were not without interest. Dr. SINCLAIR WHITE'S address was devoted chiefly to the exposition of the importance of sanitation, and was in its way most effective. He maintained that the aims of sanitary science and those of Christianity were practically identical, and that for people sunk in ignorance and depravity "sanitation must precede every other gospel." There was a mine of wealth, he maintained, in fresh air, water, and soap, and the cultivation of temperance. Dr. WHITE did not pretend that the successful inculcation of such principles was an easy matter; he does not expect mere legislation to do everything. He thinks that the Education Department might do more than it does in teaching hygiene in common schools, and he very properly pointed out the ignorance of many highly-educated people on the subject. Instances of this must have come under everybody's notice, and occur daily in the experience of medical men. Common cleanliness is commoner now than it used to be among educated people, though there are still surprising survivals of the opposite kind, and singular instances of ignorance of the virtues of fresh air. But Dr. WHITE'S appeal was in the interest of the poor, in whose straitened homes health and even decency are often impracticable. Arduous indeed is the undertaking of raising the standard of home comfort and accommodation among the people; but all must admit, in view of their tendency to forsake the country for the great towns, that it is urgently necessary, even in the interests of society itself.

A very interesting feature of the opening of the provincial session was the presence of a distinguished London teacher at Owens College and the Yorkshire School of Medicine respectively. It is a happy illustration of the good feeling which obtains between medical schools and teachers. The provinces in this matter, as in many others, set a good example to the metropolis. We sometimes hear plaintive accounts of the prolonged gestation of introductory addresses, and the months of unhappiness and anxiety which they involve to the unfortunate teacher who stands next in succession for this duty. Some of our young surgeons would rather remove a kidney or a cerebral tumour than deliver a simple introductory address. Let the metropolitan schools take a hint from the provincial ones, and ask one of the provincial teachers to address the students. It would give great freshness and novelty to the occasion, and though it would be difficult for any of our provincial brethren to give an address which would exceed the interest of that of Sir JAMES PAGET at Manchester or of Dr. MATTHEWS DUNCAN at Leeds, we venture to say that both these gentlemen would be well prepared to hear from provincial orators sound lessons in medical philosophy or in medical practice.

Owens College may well feel honoured in being the place of such a noble address as that of Sir JAMES PAGET. No student could hear it without feeling his sense of "responsibility to God and man" increased. The modesty with which Sir JAMES contrived to make his mistakes and his defects of observation do duty as a warning to his young hearers would not blind them to the rich wisdom and the rare magnanimity which appeared in every sentence. He may have missed—just missed—the significance of typhoid ulcers and of embolisms, which Sir WILLIAM JENNER and VIRCHOW and KIRKES so happily seized, but the education of his audience will not have proceeded far before they find out how much Sir JAMES has observed which others have overlooked, and how great are his contributions to pathology and practice, and above all to that higher region of professional thought and wisdom in which he reigns so easily and with such universal approval. Not the least important part of Sir JAMES PAGET'S address was that in which he dwelt on the value of private practice as a sphere for observation of facts, histories, and cases extending over long periods of time, and in which successive members and generations of a family of practitioners may take part.

The address of Dr. MATTHEWS DUNCAN is characteristic enough. Its praise of the Leeds school, started half a century since, "by the wise enthusiasm of a few medical men," was well merited. To him evolution is "that charming and valuable theory," but it leaves unsolved the great problems of conscience and responsibility. Continuity is a doctrine of the highest consequence, but it does not exclude forces which are not known to obey continuity. Schools had to provide for average men, but that did not exclude the necessity for individual effort, or hinder the workings of individual genius. His magnification of virtue was worthy of MILTON or of one of the great preachers of his own country. No good was to be expected in a medical school without this. In such a school the teachers would make shabby pupils, and the pupils would grow into mean practitioners. Dr. DUNCAN dwelt on the time necessary for medical education, and suggested that it would soon require five years, which practically is the period taken by the majority of students.

A PARLIAMENTARY PAPER has been recently printed and published containing copies of correspondence, or extracts therefrom, relating to the repeal of Contagious Diseases, Ordinances, and Regulations in the Crown Colonies. It is in continuation of other papers published this and last year, and is a most interesting document. It may be well to explain that soon after the repeal of the Acts in this country despatches were sent to the governors of different Crown Colonies—Ceylon, Hong-Kong, Straits Settlements,

Labuan, St. Helena, Malta, Fiji, Barbadoes, Jamaica, and Trinidad. In these despatches the various governors were notified that the policy of maintaining similar laws in the Crown Colonies would no doubt be called in question in Parliament, and that, if their respective Governments should be of opinion that the interests of the colony imperatively required the continuance of these laws, the Colonial Secretary wished to be furnished with any special reasons they might have for that opinion. These latter are included in the document alluded to, and, as they give most interesting information from the naval, military, and colonial surgeons, as well as the governors themselves, as to the efficiency of these laws in preventing venereal diseases, we will give them in detail.

From Barbadoes, Dr. F. B. ARCHER, the visiting surgeon to the Contagious Diseases Hospital, reports that the Act has done much good in the past and kept down disease amongst a certain class of prostitutes, but the powers of it are too limited, and it does not touch a very large class of women, who keep open houses and spread disease recklessly. He adds warningly: "I am certain, if the Act is repealed here, there will be a considerable increase of disease." He thus confirms what has been stated by those entrusted with the working of the Acts in this country and Ireland—viz., that its operations must, to be perfectly successful, embrace a wide area. He is confirmed in this conclusion by the Major-General in command of the troops. In St. Helena it appears that the Act, which was passed there in 1865 was allowed to lapse in 1879, and at present there is no law upon the subject. From Malta there comes a general opinion in favour of this ordinance from his Royal Highness the Admiral and Commander-in-Chief in a communication to the colonial surgeon. The Governor, Sir J. L. SIMMONS, urges with great reason that the legislation in Malta is not in any way the outcome of such legislation in England, but that, on the contrary, the existing law, passed in 1861 (three years prior to the first English Act of 1864), merely re-established the practice of inspecting prostitutes, which had been established probably more than 300 years previously. The temporary suspension of the practice in 1859 led to such serious consequences that it was found necessary to pass the Ordinance of 1861, which has been in force ever since. After alluding to statistics, to be given presently, he expresses a strong opinion that, quite apart from the question of the health of the military and naval forces, and looking to the civil population of Malta, the existing law should not be interfered with. Although Malta lies in the route of a great sea traffic, has a garrison averaging 3 per cent. of the total population, in addition to the seamen of the fleet, venereal disease is not prevalent, and bad forms of syphilis are relatively uncommon. The community is so small, and inter-marriage so universal, that any increase in the disease would lead to a serious spread of the infection throughout the community. It would therefore, as Sir J. SIMMONS argues, "be neither politic nor just to force on the Maltese the abolition of a hygienic safeguard which has existed certainly for more than a century, a safeguard which the maintenance by England of a garrison and fleet at Malta renders imperatively necessary in the interests of the Maltese themselves." Surg.-Gen. SINCLAIR gives the following statistics as to the troops under his command. In the year 1884 the Royal Malta Fencible Artillery (strength 374) gave no admission for syphilis. The Duke of Cornwall's Light Infantry (strength 900) arrived from England in December, 1885, with twenty-eight cases of venereal disease, and on Nov. 15th, 1886, they had only one case of gonorrhœa in hospital. The Black Watch (strength 740) arrived from Egypt on May 5th, 1886, with thirty-three cases of venereal disease; on Nov. 15th, 1886, they had no case in hospital. H.R.H. the Naval Commander-in-Chief, writes: "I am very strongly of opinion that in a place like Malta, with a very large garrison and fleet, and with, in addition, a large number of merchant seamen of all nationalities, constantly visiting the port, it is most desirable that the Acts should remain in force." He encloses a report from Deputy Inspector-General SHAW, who concurs entirely in the opinion of Surgeon-General SINCLAIR, and adds: "During my service at Malta I have found that the cases of venereal disease contracted in the island were not only very few in number, but very slight in character. This I attribute entirely to the sanitary action of the police regulations, which, if vigilantly and strictly carried out, render it impossible for a diseased prostitute to ply her trade for any time undetected; and the abolition of those regulations would, I believe, be fraught with evil consequences to the civil community, as well as to the garrison and fleet." Dr. PISANI, the chief Government medical officer in Malta, refers to the fact that the Maltese laws make it compulsory for any person and medical practitioner to report infectious disease within twenty-four hours of its detection to the sanitary authorities for the purpose of isolating them in proper hospitals or at the residence of the patients. He gives obvious reasons why venereal diseases should not be included among these, and urges that the ordinary source of venereal disease—the prostitute—can be well subjected to the measure of medical inspection, which secures early treatment. There is a consensus of opinion among the medical practitioners of Malta in favour of this inspection, and the women subjected to it do not object to it, and have given no trouble. He concludes: "I am convinced that inspection of prostitutes is here imperatively required, and that it should even be made oftener than it is at present."

It must be remembered, too, that the ratio of venereal diseases among the troops and seamen coming from the home ports and disembarking at Malta will now be enormously increased, it being well known that these diseases are as rampant amongst them as they were previously to the passing of the Acts in this country. If men of these classes are landed in Malta, and the prostitutes there are permitted to ply their trade unchecked by medical inspection and treatment in hospital, syphilis in its worst forms will soon become epidemic! It is most important, therefore, that the Government of Malta should in the most determined manner resist any attempt to repeal the existing law. The Maltese know from experience both the benefits of this legislation and the fearful consequences of its suspension in 1859. They have the most valuable of all arguments, the inexorable logic of facts. To ignore past experience, to disregard the strongly expressed opinions of governors, military, naval, and colonial medical officers ast and present, and to inflict

such evils on the colony as must inevitably result, would be nothing short of criminal.

In Trinidad the Act appears to have been practically imperative, and no medical details are given. From Hong-Kong, which resembles Malta in many respects, being insular, a great maritime highway, densely populated with an alien community, and other circumstances which make comparison with England impossible, comes the same general consensus of opinion in favour of maintaining intact the present legislation. This latter was commenced in 1857, seven years before the English Act of 1864. Previously to that year syphilis in a very severe form constantly prevailed, the type known as the "black lion" being very common. Dr. MANSON, one of the leading practitioners of Hong-Kong, informed the Administrator that the consequences of the suspension of the Act would be: "First, an epidemic of syphilis; second, this would continue until the point of saturation was reached; third, this state of saturation would be maintained until the existing or similar ordinances were reapplied." Inspector-General FISHER reports: "Venereal disease in China was formerly very prevalent among Her Majesty's forces in this command, and was of a much more virulent type and disastrous in its consequences than the same disease as existing in England. The local measures taken here have been of immense benefit, as shown by the smaller number of entries on the sick list and the milder nature of the attack. There is, however, every reason to suppose that the discontinuance of compulsory examination would soon be followed by results as serious as those of old." Dr. J. W. FISHER, Fleet Surgeon, states that in only one case out of all those contracted in Hong-Kong during the present commission has the disease been followed by constitutional effects, showing how wonderfully the more serious forms of syphilis have been stamped out by careful supervision. Speaking of Japan, Dr. FISHER adds: "The lock hospital system, combined with careful examination of all women belonging to the licensed brothels, has simply stamped out the old virulent form of syphilis which was for years associated with the name of Japan." He concludes: "I believe it to be the unanimous opinion of the naval medical officers serving on this station that the abolition or mere temporary suspension of the Acts would be attended with very grave consequences, and I have reason to believe that this is also the opinion of the medical officers of other navies." Similar testimony is borne by Major-General CAMERON commanding in China and Straits Settlements and by Deputy Surgeon-General HUNGERFORD. In addition to all this, it appears that the Acts have virtually suppressed a most horrible form of what amounted to brothel slavery, children being kidnapped and sold for immoral purposes. Mr. MARSH reports that "the women who are infected in this colony are carefully treated in the lock hospital, to which institution they manifest no repugnance after experience of the kind treatment they there receive." Very similarly favourable testimony in favour of the Acts comes from Jamaica, Fiji, Gibraltar, Straits Settlements, and Ceylon; no details are given respecting Labuan. It is much to be lamented that the discontinuance of the compulsory examinations is insisted upon in all except Malta and Fiji, where special circumstances render it imperative that they shall be continued. The Acts have been repealed in Jamaica, six members of the Council protesting against it in a very well reasoned paper. The Governor of Gibraltar (Sir A. E. HARDINGE) urges the continuance of the law, but apparently in vain. In Hong-Kong the brothels are to be still under police supervision and the lock hospital continued on the voluntary principle. We have been obliged to omit many other valuable details, but enough has been given to show the value of these Acts in the colonies as well as at home; and it is interesting to note the perfect agreement existing between the experiences and opinions of those who have had to administer them, both in these kingdoms and in the colonies.

THE question of the influence of scarlet fever hospitals on the neighbourhoods in which they are placed has been more than once brought under notice, and a communication which we have received from Mr. HENRY GODRICH, B.A., points out that the present time is one that is especially opportune for investigating the subject on the same lines that were adopted in the case of small-pox at the Fulham Hospital. We agree with him that such an opportunity ought not to be lost, but the relations of the Local Government Board to our metropolitan fever hospitals are of a sort that do not seem to favour inquiries like this, though urgently demanded in the interests of the community. It will be remembered how persistently the complaints as to the spread of small-pox were ignored, until at last Mr. POWER who apparently had no ordinary duties or responsibilities with regard to Fulham, was deputed to make an inquiry, the results of which finally upset all the views that the Metropolitan Asylums Board and the central authority had so long adhered to. In the case of scarlet fever, we are, it is true, in a somewhat different position, for the inquiries which were made some years back, when the official report on the Influence of Hospitals for Infectious Diseases was issued, went to show that, as regards the houses more immediately surrounding the London Fever Hospital, there had been no marked incidence of scarlet fever, and this although the number of patients suffering from that disease had often ranged from 500 to 900 per annum. But that inquiry did not profess to deal with the subject in the same exhaustive style as was adopted at Fulham, and the number of houses included in the investigation was so limited that protection against scarlet fever by a prior attack may to some extent have vitiated the conclusions drawn. And since that date Dr. TRIPE has brought forward some suspicious facts as to the influence of Homerton Hospital when used for scarlet fever isolation. Taking all these circumstances into consideration, it is only right that the question should be fully inquired into; and it will be obvious to everyone that the Medical Department of the Local Government Board can alone take the matter up in the manner which would be necessary to a successful result. Another point raised by Mr. GODRICH is the need for so constructing infectious hospitals that all infected air leaving the wards shall be effectually destroyed. He states that he originated the idea in a communication to the Kensington Vestry in 1877-78, and that it was only subsequently that it was advocated by Dr. BERTILLON and Dr. BURDON SANDERSON. We have often urged that such an experimental hospital should be erected for small-pox cases, and we still hope that

the managers of the Asylums Board will not long defer acting on the recommendation of the Royal Commission on small-pox and fever hospitals in this respect. But before there is any need to apply the system to scarlet fever, the public should have information from the proper source as to whether scarlet fever hospitals have, or have not, any power of distributing infection to the neighbourhoods around them by the process of aerial diffusion.

THE Harveian Orator, Dr. STONE, was fortunate in being able to import a really new theme into the annual panegyric of the man whose memory is so zealously and lovingly treasured by the College of which he was so brilliant an ornament. The publication in *facsimile* of HARVEY'S lecture notes on Anatomy, which was undertaken by the College mainly at the instigation of Sir E. SIEVEKING, was put to good account by Dr. STONE, who showed how full of interest these jottings are, and how much light they throw upon the character of HARVEY. The numerous quotations, in their quaint combination of Latin and English, which the orator culled from these manuscript pages, are full of wit and wisdom; and we doubt not that Dr. STONE will be repaid in the assurance that he has revealed to many the treasures of a priceless volume. For it is seldom that we are enabled to be brought into so intimate a contact with the living word as is possible by the perusal of these notes, which bring before the reader the man as he lived, as much as the anatomist and physiologist. But apart from the interest attaching to this exposition, Dr. STONE did not fail to urge upon the attention of the College the value and importance of a study in which he is almost alone in this country—viz., that of physiological physics. He did well to point out the defects in medical education in this respect, and he was by no means too severe in his criticism of the manner in which the University of London fulfils its duty of testing the "preliminary scientific" knowledge of students intended for medical graduation. His suggestion that a course of instruction in this subject should be one of the purposes to which the proposed new building on the Embankment may be put is one which may well be taken into consideration. Nor was the introduction of this topic at all foreign to the main object of a Harveian oration. The mechanism of the circulation may be taken as the root example of animal physics, and Dr. STONE showed by reference to HARVEY'S own words that he was not ignorant of the physical principles involved in the action of the heart, and that he paid much attention to the study of physical science as it existed in his day. With all his keen interest in scientific research, Dr. STONE nevertheless did not withhold an expression of regret at the neglect of classical training. He would fain have revived the ancient custom of delivering the oration in the Latin tongue, and hinted that the neglect of Latinity was depriving medicine of its place among the learned professions. We have no desire to revive an old controversy, but we may venture to differ from a conclusion which implies that culture is indissolubly linked with a more or less profound knowledge of dead languages. In HARVEY'S day Latin was the medium whereby students and teachers in all parts of the civilised world could exchange their ideas. To-day, the *savans* of the different nations speak in their own tongue, and education aims at imparting to each a knowledge of the languages used in other lands, so that the written thoughts can be disseminated in the freshness of their utterance, and not disguised or transmuted by being clothed in a dead language. We are less disposed, then, to agree with the opening sentences of Dr. STONE'S oration than we are with the just remarks he made on the close of his survey of HARVEY'S lectures upon the value of oral instruction. It has been often said that, owing to the multiplication of text-books, the practice of imparting knowledge by means of lectures has become unnecessary. In a few sentences Dr. STONE disposed of this shallow objection; and we commend his remarks to all those who would degrade medical education to the level of a schoolboy's task.

Annotations.

"Ne quid nimis."

THE ANNUAL MEETING OF THE COLLEGE OF SURGEONS.

THE annual meeting of the Fellows and Members of the College of Surgeons is now close upon us. The so-called report from the Council, which will be presented, will be found to consist of the Minutes of the Council meetings that have been held during the preceding collegiate year. With these Minutes, or rather, with the more important of them, our readers are already acquainted, for they have been published and commented upon by us from time to time. Nevertheless, it is desirable that Fellows and Members should make themselves thoroughly acquainted with them in order to appreciate the bearing of what may be said at the meeting. We accordingly recommend an early application to the Secretary for a copy of the report. Of chief interest at present is the attitude of the Council of the College to the Fellows and Members at large. The Council have applied for a supplementary Charter, containing, on the one hand, provisions at variance with the expressed wishes of a large section of the Fellows, and, on the other, entirely ignoring matters which the same Fellows believe would conduce to the welfare of the Royal College of Surgeons, and tend to promote the interests of medical polity and education. As regards the Members and their very natural aspirations to be admitted to some share in College management, the Council also reply with a direct negative. Thus the new Charter, which is now before the Privy Council, ignores the wishes of both Fellows and Members alike. Under these circumstances, it was felt necessary by the Association of Fellows and by the Association of Members respectively to petition against this supplementary Charter, and the matter is still *sub judice*. It appears to us, however, that the annual meeting will be a fit and proper occasion at which the Fellows and Members may again emphasise their disapproval of the course taken by the Council. To this end we hope there will be a large and influential meeting of both provincial and London men, and that the character of the proceedings will be such as to place additional arguments in the hands of the two Associations in favour of the views embodied in their two petitions now before the President of the Council.

THE SANITARY STATE OF CAMBRIDGE.

IT is singularly unfortunate that some of our university towns should lay themselves open to reproach on sanitary grounds, for as centres of learning they should not afford examples of that which can only result from failure to carry out the first principles of health requirements. This time Cambridge is in question, and Dr. Alfred Carpenter, who has

been there to co-operate with the University in granting certificates in Sanitary Science, can only express his disgust at the extent to which the sanitary needs of the town are ignored as regards sewerage and the filthy state of the Cam. Mr. R. C. Lehmann fully supports the complaints that are made, and it is evident from his statements as to the black, oozy, sewage stuff that is being dredged from the river, that intending Cambridge graduates will have to live on the banks of a filth-laden stream, and to boat in a solution of sewage. Mr. Lehmann throws the blame in the first instance on the Cambridge sanitary authority, who have ever since 1864 ignored their most elementary duty in this respect; and next on the Local Government Board, who after having held two local inquiries, and having then informed the Commissioners that, unless they formulated a complete scheme at an early date, a time would be fixed within which the work must be carried out, appear to have settled down into a condition of inaction. It is a matter of Imperial as well as of local importance, that such a place as Cambridge should free itself from such serious conditions of nuisance as are the result of the want of a proper system of sewerage and sewage disposal, and we can only wonder that those who are interested in the welfare of the town and university do not bring the subject before the attention of the House of Commons.

BERI-BERI AND ANCHYLOSTOMIASIS.

WE have received from Dr. W. R. Kynsey, Principal Civil Medical Officer and Inspector-General of Hospitals, Ceylon, a copy of a report on "Anæmia or Beri-beri of Ceylon." This singular affection, which has received of late years much attention in all parts of the world where it exists, has been attributed to a variety of causes. It is described as occurring under two forms—one which is marked by paralytic symptoms, the other in which a dropsical condition predominates. We published recently a full account of the affection, to which reference may be made for its peculiar characteristics, the most constant and striking of which is the progressive anæmia. There can, we think, be little doubt that the term "beri-beri" is an elastic one, and that more than one essential disease is included under it. Such, indeed, would appear from this fact alone, that its pathogeny has been by some ascribed to a bacterial source, by others to a poison which produces multiple neuritis, and again to the presence of intestinal parasites, such as the tricocephalus dispar (Erni), and the anchylostomum duodenale. Dr. Kynsey is persuaded that, in Ceylon at any rate, beri-beri (which is there of the "wet" or "dropsical" variety only) is none other than anchylostomiasis, more widely known, perhaps, under the various designations of "Egyptian chlorosis," "miner's anæmia," "brick-burner's anæmia," and the "St. Gothard Tunnel disease." The facts adduced by Dr. Kynsey in support of his contention seem to be strong, for he has detected the presence of this parasite in large numbers in all the cases he has examined. Certainly such an explanation is far more feasible than the alternative supplied by Erni in support of the tricocephalus. For, so far as we know, the latter parasite, which is exceedingly common in many countries, does not, like the anchylostomum, injure the intestinal wall and lead to hæmorrhage. The tricocephalus theory of beri-beri may rank with the bothriocephalus theory of pernicious anæmia, with even perhaps less justification. Nevertheless, the inquiry into the effect produced by intestinal worms upon the general health of their hosts is one which has been too much neglected, and the attention that is now being directed to the subject may result in the production of important additions to knowledge. The Ceylon form of beri-beri is free from the paralytic symptoms which are described as occurring from the first in other countries. It may run an acute or chronic course, and death is often appallingly sudden. The severity of the symptoms depends on the number of the parasites present in the intestines, the state of health, and the food. Residence in an infected centre is necessary for the development of the symptoms, the larvæ of the parasite being present in drinking water. If recognised early—viz., the dyspeptic or anæmic stages,—the disease readily yields to treatment; but if neglected until dropsy and cardiac degeneration set in, the prognosis is most unfavourable. Removal from the infected area is essential, and the best remedy for the expulsion of the anchylostoma is thymol, and for the anæmia iron, followed by digitalis or strophanthus. But no treatment avails until the parasites are expelled. The foregoing is the gist of Dr. Kynsey's conclusions. But he has added greatly to the value of his report by appending a translation by Dr. J. Macdonald of the admirable and exhaustive monograph upon "Anchylostomum duodenale and Anchylostomiasis," by Dr. Adolph Lutz, by far the most complete account of the parasite and its effects that has been published. A translation of Erni's article on Tricocephalus dispar and Beri-beri is also appended.

THE ROYAL BERKSHIRE HOSPITAL.

THE memorial, signed by twenty-eight medical men, forwarded to Mr. Benyon, president of the hospital, asking for the appointment of a Fellow, or at least a Member, of the Royal College of Physicians to fill the vacancy caused by the death of Dr. Shea, has been submitted to the Board of Governors, with whom rests the appointment of the candidate selected and approved by the medical and surgical staff. A fact of importance should be recorded in reference to the appointments to this hospital. For many years, we are informed, it has been the custom to appoint to the surgical staff those who are either the descendants of former surgeons, or those who have been pupils to one of the surgeons, or those who have been in partnership with them or their successors. This custom, whether accidental or intentional, has been rarely deviated from for a period of more than twenty-five years, except in the case of minor temporary appointments. The effect of such a custom is to shut out from the hospital able men from among the practitioners of the town and elsewhere, and naturally tends to discourage highly qualified men from becoming candidates when a vacancy occurs at the Royal Berkshire Hospital.

SMALL-POX ISOLATION AT PERTH.

A LIVELY discussion has been going on in Perth as to the propriety of the action adopted by the managers of the General Infirmary in retaining in that institution three nurses who had contracted small-pox in the performance of their duties. The disease having been imported, the patients attacked were removed to the small-pox hospital belonging to the sanitary authority; but the infirmary authorities declined to allow such removal in the case of the nurses, and this action has met with a protest from Dr. Simpson, the medical officer of health. Unless a general hospital has means for isolating small-pox in a completely detached building, with independent laundry, kitchen, and supervision, it is wrong to attempt the treatment of small-pox in such an institution; and the attempt has over and over again led to an extension of disease such as the ordinary patients have no right whatever to be exposed to. Even in the London Fever Hospital, where a separate and detached isolation building is available, the retention of a small-pox patient is never so much as contemplated. The real secret of the action which has been adopted in Perth seems to be that the authority's small-pox

hospital is not a proper one for the reception of persons holding the social standing which the nursing staff of the infirmary occupy. If so, the authority are to blame, and should forthwith remedy the evil; for it is their duty to protect the public from infection, whatever may be the social standing of those with whom the danger lies.

PROFESSOR BILLROTH.

THE numerous friends of Professor Billroth all over the world will be pleased to learn that his health is thoroughly restored, and that he has resumed his cliniques at the General Hospital, Vienna. On the occasion of his first lecture he received a great ovation. The theatre was crowded with professors and students for a long time before the lecture hour had arrived, and the entrance of Professor Billroth was welcomed with loud and long-continued applause. Dr. Preis then advanced and tendered in the name of his colleagues and the pupils a hearty welcome to the Professor, with an expression of joy at his recovery from so severe and dangerous an illness. In reply, Professor Billroth made some feeling remarks, recalling the time when, twenty years ago, he first taught in that place, with colleagues such as Rokitansky, Oppolzer, Skoda, Demme, Dittel, Hebra, and others, who had all since passed away. He warmly thanked those present for their kindness during his illness, and their reception of him that day. He had not expected to have been there again, but he had been snatched from death by the self-sacrifice and devotion of his colleagues. He spoke of the kindness and love which had been bestowed upon him on all sides, and said that he would devote all his strength to the welfare of mankind, the glory of the old Vienna University, and the prosperity of Austria. He then proceeded to speak of the life work of von Langenbeck, and suggested that, in respect to his memory, the meeting should be closed. After this, Professor Billroth took them over his wards, and operated on a case of double hare-lip.

OUR ARMY.

THE General Annual Return of the British Army for the year 1886, issued from the Horse Guards, shows the average strength to have been 7218 officers, 682 warrant officers, and 195,905 non-commissioned officers and men. Of these, 3556 officers, 441 warrant officers, and 94,060 non-commissioned officers and men were serving at home; and 3662 officers, 241 warrant officers, and 101,845 non-commissioned officers and men abroad. During the year the deaths among the non-commissioned officers and men, at home and abroad, amounted to 2721, or in the ratio of 13·89 per 1000 of strength, being slightly higher than in the preceding year. There were 2789 men discharged as invalids, or 14·24 per 1000, which is 4·51 per 1000 less than in 1885. The total loss from these two causes, therefore, was only 28·13 per 1000. There were 71,786 recruits enlisted, of whom 20,183 were rejected on primary inspection and 2410 on secondary, making a total of 314·7 rejected per 1000 enlisted. In the preceding year it only amounted to 290. Of 38,813 recruits who joined, 26 died and 49 were invalided within three months of the date of enlistment, and 335 were discharged at the end of that period "as not likely to become efficient soldiers," being respectively in the ratios of ·67, 1·26, and 8·63 per 1000, or a total decrease in three months of 1 per cent. Of the recruits who joined, 402 per 1000 were under nineteen years of age, 234 between nineteen and twenty, and 364 were twenty and upwards; this shows the unsatisfactory result of an increase of the younger class of recruits compared with the previous year. As regards the heights of the men passed into the service, the ratio per 1000 under 5 ft. 5 in. was 283; 5 ft. 5 in. to 5 ft. 6 in., 211; 5 ft. 6 in. to 5 ft. 7 in., 192; and 5 ft. 7 in. and upwards, 314. This shows an increase of 16 per 1000 in the proportion at 5 ft. 6 in. and upwards compared with the results for 1885. The chest measurements were—under 34 in., 350; from 34 in. to 35 in., 344; and 35 in. and upwards, 306, which are less favourable than in the preceding year by 5 per 1000 in the first group. The proportion at different weights was—under 120 lb., 187 per 1000; 120 lb. to 130 lb., 374; and 130 lb. and upwards, 439; the last being 20 per 1000 higher than in 1885. There would appear, therefore, to have been a falling off as regards age and chest measurements, but a gain in the heights and weights. It may not be uninteresting to compare these results with the ratios obtained regarding the non-commissioned officers and men serving on January 1st. Their heights were—under 5 ft. 5 in., 102 per 1000; 5 ft. 5 in. to 5 ft. 6 in., 176; 5 ft. 6 in. to 5 ft. 7 in., 206; and 5 ft. 7 in. and upwards, 517; the chest measurements—under 34 in., 72 per 1000; from 34 in. to 35 in., 159; and 35 in. and upwards, 769. No information is given as to the weights of the men serving. In addition to the effective force, the return gives a number of tables respecting the auxiliary and reserve forces. The average strength of the first class of the army of reserve was 44,215, and among them 333 deaths were reported, or in the ratio of 7·43 per 1000; and of the second class the strength was 6028, and the deaths 153, or 24·97 per 1000. The men of the first class were, with a few exceptions, under thirty-five, while the second class were almost all over forty years of age. The death-rate of the Militia, as shown in this return, was only 3·96 per 1000; of Yeomanry Cavalry, 4·46; and of Volunteers, 3·56; but there is good reason to believe that many of the deaths in these branches of the service are not reported, and are struck off the strength as "absentees."

DEATH BY HEART-FAILURE FROM STOMACH IRRITATION.

IF the means of masticating food be wanting, the first stage of the process of digestion cannot, of course, be performed, and this is in itself a great evil; but, as a recent fatal case has shown, actual perils to life from physical causes may arise, and perhaps become disastrously effective. By post-mortem demonstration, it has been proved that an accumulation of unmasticated food taking place in the stomach may so distend the stomach as to press upon and irritate the heart in such manner that, being in a morbidly weak or exhausted condition, its natural function may be arrested and death take place by syncope. It is a familiar fact that a greatly distended stomach may cause "palpitation" and other distressful experiences, and it is not in the least degree surprising to find that the excitation set up may be so aggravated as to produce fatal effects in a special state of the organism. But it is important to notice how this untoward ending is reached, because the attainment of this issue is only a question of degree in the disturbance. The operation from cause to effect is purely one of nerve action, and the *modus operandi* is either completely reflex, in which case the process is exhaustive as regards the particular centre affected, or partially reflex, the circuit, so to say, being broken at the centre, and the force of the peripheral excitation exerting an inhibitory influence on the cardiac or occasionally the respiratory centre. It seems probable that in certain cases there may be spasm of the muscular coat of the vessels of the heart (perhaps the coronary), or of the heart itself, producing either a condition resembling that which is supposed to obtain in some forms of "angina," or arresting the ventricular contraction in systole, or, it may be, by asystole, though this last-mentioned ending is perhaps more commonly reached by inhibition, as in another class of cases. When the excitation caused at the periphery is of a

nature corresponding with, and in some respects resembling, high tension of an electric current, the stimulus propagated along the afferent nerve trunk may so act on the centre, indirectly perhaps, as to interrupt its action. In this last event death will occur by arrest of the ventricular movement in diastole or arrest of the systole. Or the obstructive or exhaustive action may be upon the respiratory centre with seemingly "asthmatic" symptoms at the opening of the attack, in the course of which death occurs. Happily cases of a fatal issue from peripheral irritation of the nerves are not of very common occurrence; but this renders it the more desirable that those which do occur should be very carefully investigated. The subject of death from "heart disease" is one that greatly needs to be studied in the light of precise pathology.

SIR WILLIAM GULL.

As we announced last week, Sir William Gull was taken ill on Monday, the 10th inst., with right-sided hemiplegia. There was almost total paralysis of motion of arm and leg; tongue, eyelids, and facial muscles quite unaffected; intelligence not appreciably impaired. He was seized when out walking, about noon, and required to be assisted home. Twenty-four hours afterwards his motor power had largely returned; but there remained very considerable sensory paralysis of the whole right side, most marked in limbs and trunk, but quite observable in face, neck, and scalp. Since then, now nine days, his condition has been one of consistent gradual improvement. On the second day there was some slight disturbance, owing to sluggishness in the excretory functions, which, with a little assistance, soon righted itself. When visited by Mr. R. W. Irvine, M.B., of Pitlochry (under whose care he is), on Oct. 18th, at 4 P.M., Sir William was perfectly intelligent, clearly appreciating his own condition. He was taking light nutriment, and an occasional two-drachm dose of brandy-and-water. Functions acting well, and motor paralysis only slightly observable; sensory symptoms more marked. He is kept quite quiet, and all kind inquiries from friends, both by message and in person, are kept from him. The one feature in the case which has been the occasion of special anxiety has been a certain hæmorrhagic tendency. Last year he had hæmoptysis, and, later, profuse epistaxis. At the time of this occurrence he had slight and transient but marked hæmaturia, and in the light of this the brain lesion cannot escape being ascribed to a similar cause. For a week at least to come no attempt will be made to change the present system of treatment—namely, that of strict quiet, lightest diet, and the recumbent posture. It is hoped that by the end of next week, accidents excepted, the patient may safely sit up. He is nursed by his daughter and a nurse from Guy's Hospital.

MICRO-ORGANISMS IN THE AIR.

THE attention which Dr. Percy Frankland has devoted to the examination of the atmosphere for micro-organisms has resulted in a further communication to the Royal Society by himself and Mrs. Frankland, entitled "Studies on some New Micro-organisms obtained from the Air" (*Phil. Trans.*, vol. clxxviii.) This joint memoir is very creditable to the authors. It contains descriptions, with drawings, of the morphological characters of the microbes and their cultures. These include ten species of micrococci, twelve species of bacilli, two of saccharomyces, and an unnamed mould producing a dark-brown pigment. The specimens were obtained from various localities, and the descriptions embrace a few which have been sent to the authors from abroad. It is pointed out that, although from the fact of brilliant discoveries having been made in the etiology of infective diseases the greatest share of attention has hitherto been devoted to pathogenic micro-organisms, yet there is much to be profitably done in the investigation of non-pathogenic forms. Indeed, the part they play in the economy of nature may equal in importance that of the disease-inducing microbes, as instanced in the conversion of sugar into alcohol, the decomposition of nitrogenous matter with elimination of ammonia, the oxidation of ammonia to nitrous and nitric acids, and other natural transformations. There is certainly scope for much original research in this direction, and Dr. Frankland does well to pursue his inquiries into this comparatively untrodden ground.

OUR MILITARY PRISONS.

THE information given in the "Report on the Discipline and Management of the Military Prisons in 1886," regarding the health of the prisoners, is of the most meagre description. In the home prisons the percentage of hospital cases to the daily average of prisoners is stated as follows—Aldershot 18·0, Brixton 50·3, Chester 4·5, Gosport 10·4, Lancaster 0, Taunton 64·3, Glencorse 31·3, Cork 102·3, Dublin 17·7, Limerick 86·8. No information is given as to the diseases which came under treatment, nor is any explanation offered of the very remarkable range of sickness, from Lancaster, where no cases were reported, to Cork, where they exceeded 100 per cent. of the average strength. Nor are we informed whether any deaths occurred, except that in an "extract from the report of the medical officer" of Brixton prison it is stated that three died. The great range in the relative proportion of sick in the home prisons is the more remarkable when compared with the results from prisons abroad. These were—at Alexandria 53·1, Barbadoes 61·1, Bermuda 53·3, Cairo 47·7, Gibraltar 31·5, Halifax 105·5, and Malta 37·6 per cent. The very high ratio in the Halifax prison seems to call for inquiry on the part of the military authorities. With that exception, however, the range of sickness is not greater than might have been expected where the numbers are limited, and presents a striking contrast to that which is experienced—perhaps we should rather say is shown—by the returns of the home prisons; for it seems almost certain that the latter result arises from a want of uniformity in the system of admitting, or of reporting, the cases, rather than from a difference in the incidence of disease.

SEWAGE DISPOSAL.

LAST week the new system of sewage works at Henley-on-Thames was formally inaugurated. As a matter of fact, it has been in existence for some little time, but the ceremony to which we refer was delayed until it was assured that the machinery was in proper working order. Henley had been one of the districts which discharged their sewage into the Thames, and when this could be no longer permitted the corporation had to seek other methods for its disposal. The difficulty against which they had to contend was that of level, but this has been altogether overcome by the adoption of the Shone hydro-pneumatic system, which has been successfully used at Eastbourne. Situated in different parts of the town are ejectors which receive the sewage, and from which it is forced by compressed air into tanks distant about a mile from the houses and at a height of 180 ft. above the ejectors; here it is finally disposed of by irrigation, the solid matters being sold to farmers for manure. The advantages of this method are now well known; it relieves local authorities of all disadvantages which result from their town being situated at a lower level than the land to be irrigated; it is by no means costly, and sanitary authorities are no longer able to plead physical difficulties as reason for delaying the adoption of a proper system of sewage disposal. The cost to Henley-on-Thames has been about £18,000.

THE BELGIAN MEDICAL FEDERATION AND MEDICAL LEGISLATION.

IN an address recently delivered to the Belgian Medical Federation by the President, Dr. Van den Schrieck, the members were congratulated on the disposition which has begun to manifest itself amongst the medical profession to act on the defensive in the struggle for existence, which is every year becoming more and more severe, and a *résumé* was given of the endeavours made by the Federation to promote a Medical Bill in the Houses of Parliament which should be favourable to the interests of the profession. The points desired were, briefly, the reimposition of a degree in arts as a necessary qualification for entering on medical study; a central or State examination to be obligatory on all, whether possessed of university degrees or not, as well as on all foreign medical men wishing to practise in Belgium; and lastly, the suppression of the examination for the diploma of surgeon-dentist as at present arranged, dentistry to be treated as a surgical specialty. The Federation believed that if these alterations could be obtained the overcrowding of the profession would be stopped, and the character and attainments of its members raised. The President complains, however, that the nature of the changes asked for has not been properly understood in Parliament, even the medical members not seeing their way to urge them on the House. The committee of the House which has had to report upon the Bill is in favour of continuing to allow university degrees to form a qualification to practise, and giving the central examining board only such students to examine as have not taken a degree. The majority of the committee, too, are unfavourable to the proposal to make an arts degree obligatory. According to the Government Bill a complete five years' course in arts will be required, but not a degree. M. Thiriar, the eminent surgeon, seems to have been almost the sole member of the House who expressed views in accordance with those of the Federation, and consequently there seems but little hope that the Medical Bill, when passed, will satisfy that body. M. Van den Schrieck was able to announce that he had succeeded in arriving at a good understanding with the Pharmaceutical Association, notwithstanding the recriminations which have been passing freely of late between the doctors and the pharmacists, and of which we can hardly hope that we have even now heard the last.

THE LATE GEORGE FORDHAM.

THE death of George Fordham has called forth universal praise and commendation of the late jockey. His virtues were the more remarkable since his occupation threw him in the midst of temptation to yield to almost every base and sordid motive. It is saying a great deal of a man that nearly forty years' association with the turf left his character without a stain of dishonour. It is not necessary here to refer to his skill as a horseman. Fordham succumbed to phthisis, from which he had suffered for a long time. A contemporary draws attention to the fact that none of Fordham's relatives were subjects of consumption, and conjectures that the hard life incidental to his profession must have been the cause of his fatal malady. There is every reason to believe this to be the true explanation. Exposure to chills, profuse sweatings, and enforced starvation to get down weight, must in the long run tell their tale save in the most robust constitutions. Had Fordham come of a tubercular stock, he would probably have succumbed in his youth. Constable, and, if we mistake not, Kenyon—notable jockeys in their day,—fell early victims to phthisis, which only overtook Fordham with its "second wave," when he had just started on the downward curve of organic life.

THE CLINICAL SOCIETY.

THERE was a good attendance of members at the opening meeting of the winter session of the Clinical Society on Friday last, when Dr. Broadbent, the President, made a few remarks appropriate to the occasion. He said that it was unnecessary to exhort the members to increase their activity, for already there were numerous interesting papers in the hands of the secretaries. But he thought there would be some advantage to be derived from a bringing together on the same evening of cases of the same kind, or at least to group together cases illustrating similar points of practice, diagnosis, and treatment. In order to effect this purpose papers should be sent in soon, so that the secretaries might carry out the needed classification. In referring to the recently issued volume of the Transactions, the President said he believed it was the first time that the annual volume had been sent out before the opening of the winter session; it was an evidence of the great activity and energy of the secretaries, and would, he hoped, become a precedent. He remarked that the new volume contained the valuable report of the Committee on Charcot's Joint Disease, of which the President was Sir James Paget, and at the latter's special request he took the present opportunity of repeating how much the Society as well as the Committee were indebted to the personal work and intelligence of the honorary secretary, Mr. Bilton Pollard, for the completeness of the report and the promptness with which it had been drawn up.

A FUNGUS IN THE EAR.

DON JUAN SALELLES of Valencia describes in the *Revista de Laringologia Otalgia y Rhinologia* a case of a rare vegetable parasite, *aspergillus flavescens*, obstructing the external meatus of the ear of a young man. After syringing away a quantity of black matter, a smooth glistening substance of a dirty white colour with black spots was seen, which was the mycelium of the fungus studded with dark spores. All attempts to remove this with forceps provoked so much pain that they had to be given up. Glycerine was dropped into the ear, and in two days' time the patient returned in terrible suffering, the dark spores having been developed and forming a large mass. After this had been removed by syringing, alcohol and tannin were introduced, and at the next visit the mycelium was removed by the syringe, the membrana tympani becoming visible. In a month's time the fungus began to reappear, but was rapidly subdued by similar treatment, which was followed up by the daily instillation of dilute spirit for a short time. No further return occurred, and the patient entirely regained his power of hearing. The introduction of the fungus appeared to have been due to the use of some oil of sweet almonds, which had been kept for some time in an open bottle, and which the patient had been in the habit of dropping into his ear along with milk, as he suffered from otalgia.

CREMATION.

A FUNERAL of a somewhat unusual character took place on the 8th inst. at Birstall, a suburb of Leicester, when the cremated remains of the late Dr. Buck of that town were consigned to the earth. The church in which the service was held was decorated for a harvest festival, the burial service itself was choral, and the whole scene was remarkable for the absence of any of the usual outward trappings of grief and woe, though nothing could have been more impressive and solemn. The ashes of the deceased were carried by two friends in a small marble box. Dr. Buck was until two years ago physician to the Leicester Infirmary, and from his scientific attainments and zeal for his profession gave promise of a successful future career. Suddenly, to the

grief of all who knew him, he was struck down from the work of life by general paralysis. He had taken an active part in the promotion of the Leicester branch of the Cremation Society, and in accordance with his own wishes his body was cremated at Woking Crematory, and his ashes brought for burial to his home, as above stated.

MINERAL THREADS.

AN interesting paper on this subject by Mr. C. V. Boys, Demonstrator of Physics at the Science Schools, South Kensington, appears in the current number of the Journal of the Physical Society of London. Fibres of glass and other elastic materials are applicable to a variety of purposes in physical research, such as torsion balances, the fine lines fitted to the eye-pieces of optical instruments, the suspension of solids in the determination of specific gravities production of diffraction spectra, and the like. Spun glass has often been used for such purposes, but Mr. Boys shows that far finer and more perfect fibres can be obtained. He describes several ingenious modes of preparing such fibres, and has experimented with various materials. Melted resin, Canada balsam, and other viscous substances, when insulated and strongly electrified, shoot out threads of extraordinary tenuity but of little strength; but better results were obtained when light arrows, made of straw and attached to beads of melted glass, were shot from a powerful cross-bow. In this way perfectly uniform threads, $\frac{1}{10000}$th of an inch in diameter, are readily obtained. Still more remarkable results were obtained with rock crystal melted in the oxy-hydrogen blow-pipe. Some of these threads were invisible even with the highest power of a microscope, and must have been less than the $\frac{1}{100000}$th of an inch in diameter. Fine threads of rock crystal seem to be superior to all others. Their strength is equal to that of steel, and their elasticity is enormous. Most other threads are subject to the defect of "elastic fatigue"—that is, they do not return after torsion to their original position. This defect is not found in rock crystal, which will therefore be of great value in torsion apparatus, for which spun glass is useless. Spider lines are coarse compared with the filaments which can be obtained in this way, and the diffraction which they yield is said to be excellent.

TARNIER'S BASIOTRIBE.

TARNIER'S basiotribe, a somewhat complicated instrument which was described by him to the Paris Academy of Medicine in December, 1883, has recently been used in three cases in Professor Kufferath's obstetric wards in Brussels, with, it is stated, very satisfactory results, the application being made with great facility, no splinters penetrating the scalp, and the mothers being all able to leave the hospital on the tenth day.

PELLAGRA IN BADAJOZ.

DR. ANTONIO PONS SANZ, of Fuente de Maestre, writes to *El Siglo Médico* that several cases of pellagra have been observed in the province of Badajoz. During the spring of the year patches of erythema appear on the dorsum of the hands, and sometimes on the neck, which are attributed to the action of the sun. These are sometimes of a dark red, or even of a coffee colour, and are followed by desquamation. Afterwards diarrhœa and other gastro-intestinal troubles make their appearance, with a certain degree of jaundice. These are accompanied by nervous symptoms, amaurosis, want of co-ordination both in the movements and in the thoughts, and sleeplessness. Melancholia supervenes, and the patient not unfrequently commits suicide. As to the etiology of this disease, which is fortunately unknown in this country, being chiefly met with in Lombardy, and which is generally put down to eating diseased maize, Dr. Sanz observes that the food of the people in the province is very rich in proteids, and that they never eat maize, but that the victims of the disease have generally been addicted to drink; he has frequently observed, also, that they were the subjects of a "herpetic diathesis." The best treatment, in his opinion, is arsenic combined with the baths of Alange. By these means he has been able to overcome the nervous symptoms and the sleeplessness.

SCARLET FEVER IN LONDON.

THE number of cases of scarlet fever admitted into the hospitals of the Metropolitan Asylums Board during the week ending Oct. 14th showed a slight increase on the number of the preceding week, 246 and 277 cases being admitted during these two periods respectively. Huts have been erected in connexion with the hospitals at Hampstead, Homerton, and Stockwell, and the Winchmore Hill Hospital has been open a sufficiently long time for some of the patients to be discharged. In all probability the vacancies created by discharges and deaths will provide sufficient accommodation for those who may yet have to seek admission, and the existing hospital provision, with the huts, which are nearly completed, will be found sufficient for the requirements of the epidemic. This, it may be anticipated, will soon begin to decline. The first week in November should show a diminution in the number of admissions, and from that moment the number discharged should greatly exceed that of those received. On Tuesday morning the returns showed that the hospitals contained 2176 patients under treatment, of whom 2052 were suffering from scarlet fever, 113 from enteric fever, and 5 from diseases which were not infectious fever.

DILATATION OF THE STOMACH.

IMMEDIATELY following the psychological address with which Dr. Hughlings Jackson opened the new session, the Medical Society proceeded to the consideration of a common topic in practical medicine. Dr. Clifford Allbutt's paper on Dilatation of the Stomach was thoroughly practical, and was based on a wide experience. It will do good service in directing attention to the frequency with which the slighter, but not less intense, degrees of this affection occur. There is no doubt that under the guise of atonic dyspepsia many cases of this organic affection of the stomach have been concealed; and Dr. Brunton was quite justified in alluding to the curious neglect with which the affections of the muscular walls of that organ are treated, as compared with similar states of the intestine. Much was said of the advantages of Kussmaul's method of washing out the stomach, and perhaps too much was made of the objections offered by patients to the plan. Certainly all those patients who do practise it speak in praise of it; and a few months ago we received a long communication from a sufferer from this malady, who had been treated for a long time by other remedies without avail. At length he was fortunate enough to have this method prescribed him, and his enthusiasm in its behalf was an index of the vast relief it afforded. At the same time Dr. Hare did well to recall attention to the practical utility of a timely emetic, which is of value in cases where the affection has not proceeded too far. Wide as is the experience of Dr. Clifford Allbutt, it may hardly be equal to that of Professor Bouchard, who goes so far as to say that three out of every ten hospital patients have a dilated stomach ("Auto-intoxications dans les Maladies," 1887). Prof. Bouchard, moreover, attributes a multiplicity of ailments to this cause, on the ground that the products of fermentation in the organ have a toxic effect upon the economy. When we say that amongst the ill results of gastric dilatation this authority claims phthisis,

chlorosis, many nervous disorders, skin diseases, albuminuria, rickets, and nodular rheumatism, it will be at once obvious that what some consider as causes he regards as effects. This, perhaps, was most strikingly shown in the case cited by Dr. Brunton of floating kidney complicating gastric dilatation. Dr. Brunton suggested that the gastrectasia in that case might depend on reflex irritation through the splanchnic nerves. His remark that movable kidney and gastric dilatation are not infrequently combined, and that it is the right kidney that is the one most commonly at fault, is strikingly corroborative of Bouchard's statement that 14 per cent. of this gastric affection are associated with movable kidney. He remarks that if the renal ectopia were the cause of the stomach trouble, the latter should be more frequent in women than in men, whereas the reverse is the case; and he attributes the former condition to mechanical displacement during temporary attacks of hepatic congestion, to which he says gastric dilatation specially disposes.

CHARING-CROSS HOSPITAL POST-GRADUATE COURSE.

THIS course of lectures is meeting with considerable support. Already 104 members have joined, and others are entering daily. What is, however, more remarkable even than the quantity is the quality of those who are joining. The members are in large and busy practice or hold important public appointments. They come not only from London itself, but from the country for thirty and forty miles round. With the increasing numbers the interest seems to grow. Questions are freely asked by the members at the close of the lectures, and answered by the lecturers. Every appliance has been provided for the class, and the whole staff as well as the governors and officials of the hospital have lent assistance to the movement. At the ward visits not only are cases shown illustrative of the lecture, but others that happen to be available are also made use of. Last Friday Mr. Barwell, F.R.C.S., showed seven typical cases of Lateral Curvature, and exhibited various appliances for remedying the disease. To-day (Friday), Dr. T. Henry Green, F.R.C.P., lectures on "Albuminuria."

HÆMATOLOGY IN THE NEW-BORN.

THE physiology of the blood of the new-born has not been adequately investigated, and we welcome, therefore, the observations of Silbermann, an abstract of which appears in the *Archives of Pædiatrics*, No. 45. Hofmeier had found that the size of the red blood-corpuscles was very variable; that their form was more spherical than in adults; that they showed no tendency to run into rouleaux; that the white corpuscles are often in greater proportion than usual; that the white corpuscles tend to accumulate in rouleaux, and that they are viscid, deliquescent, and easily destroyed. Silbermann confirms Hofmeier, and also shows in addition that the blood of the new-born contains *shadows*, which are certain delicate pale rings forming the stroma of red blood discs, the colouring matter having been removed. These bodies, first discovered by Ponfick, are found to be more abundant the more disturbed was the child's general condition during the first few days of life. Hæmoglobinæmia induced by this general disturbance does not always lead to hæmoglobinuria; but if it occurs, then, according to Schmidt and his disciples, the circulating blood will contain a relatively large quantity of fibrin ferment, red and white corpuscles having contributed to this result. Silbermann concludes from experiments on frogs, dogs, and puppies, giving results in the blood identical with those deviations met with during the first few days of life in the blood, urine, and liver of infants, that there was a free destruction of red corpuscles, resulting in the liberation of free hæmoglobin. Venous stasis and hyperæmia were found, and attributed to this consequent increase in the fibrin ferment, resulting from excessive destruction of the red and white blood-corpuscles. So it seems that the condition of the blood in the newly born predisposes to disease, and, in the presence of such conditions as asphyxia, omphalitis, syphilis, gastric and intestinal catarrh, and erysipelas, is likely to be of grave importance. It is supposed that the liver would convert the extruded hæmoglobin into bilirubin, and this is perhaps one of the natural functions of the liver, which, for aught we know to the contrary, may also aid in the destruction of the red blood discs as well as in the manufacture of bile. It is possible that this destruction and manufacture are one and the same process. The conclusions of Silbermann are worth repeating, and in this direction: The blood of the newly born shows evidences of imperfect stability in the variation in size of the corpuscles, in the presence of *shadows*, and in being rich in fibrin ferment. These results may be due to liberation of the hæmoglobin, and they may predispose to disease, since all morbid processes involving great destruction of albumen in the circulation are probably very dangerous to life.

THE NEW ENTRIES.

THE following is a list of the fresh entries for the current winter session at the various medical schools from which returns have been received:—

	Entire course.	Special classes.	Prelim. Scien.
University College	69	—	74
St. Thomas's	75	38	—
London Hospital	80	45	—
King's College	37	43	11
Middlesex Hospital	48	35*	1
Owens College	70	21†	37
Newcastle-on-Tyne	33	27	—
London School of Dental Surgery	22	—	—

* Including 7 dental. † Including 5 dental.

FEVER IN BURNRIGGS.

IN this village, which is near Carlisle, typhoid fever is stated to have attacked forty out of a total of some 130 inhabitants; and, as is so commonly the case, when once the disease and death occur, which it is a first duty of sanitary authorities and their officers to prevent, then we suddenly learn of polluted water, insanitary surroundings of houses, stench from nuisances, and just the very things that ought to have been dealt with long before they resulted in such mischief death. And now we hear that, amongst other things, a well has been cleaned. If the well has been polluted by reason of impurities in the surrounding soil, we do not see much good in cleaning it, and then proceeding to let the water into it again from the same source. The case of Burnriggs is typical of much so-called sanitation in rural districts.

RETRO-STERNAL PULSE.

THE clinical physician frequently palpates the supra-sternal fossa with the object of detecting abnormal pulsation in cases of aortic or innominate aneurysm, but to detect any very obvious pulsation is rather a rare occurrence unless an aneurysm is present. It is with some surprise and curiosity, therefore, that we read in the *Revue Générale de Clinique et de Thérapeutique* of Oct. 13th, No. 35, that M. Maurel of Cherbourg has 200 times out of 500 cases detected a pulsation by depressing the integuments above the supra-sternal notch, with the object of palpating the region of the posterior surface of the manubrium. This phenomenon is believed to be due to pulsations of the left

innominate vein, especially in cases of insufficiency of the tricuspid valve and of excessive venous tension, whether from dilatation of the aorta or not. The author has specially noted this retro-sternal venous pulse in cardiac affections and in the early stage of typhoid fever. M. Cuneo regards this pulse as a sign of aortitis, and aortitis may be of malarial origin.

PHYSICAL CONDITION AND PHYSICAL PUNISHMENT.

EXPERIENCE has abundantly proved that for some offences corporal punishment is a corrective of no small value. The rascals who are periodically sentenced for assaults against the person are known to dread the lash even more than the rigorous discipline of prison life and the forced exercise of prison labour. It is to be hoped that no mistaken philanthropy will rob the law-respecting of that friend of justice, the cat-of-nine-tails. Equally suitable for a younger generation of offenders is the birch, by which authority vindicates its title to their obedience. The Home Secretary is, however, of opinion that this form of chastisement is in some danger of being overdone. It may be so. There are in every social grade feeble children who stand physical punishment badly. It is well to make provision for such, and the recommendations to the Commissioner of Police that the weight of the birch ought to bear some proportion to the age of the child, and that a medical veto should be available to protect the latter if evidently weak. Indeed, we must insist that in all cases of the infliction of corporal punishment on children the opinion of a medical man should always be taken. Sir Charles Warren is, we understand, making inquiries into the subject with a view to determining what modifications are possible in this form of punishment. It must not be forgotten that by far the greater proportion of criminals, young and old, are town-bred, and that the conditions of life in the back slums of a city, in the presence of abounding dirt and discomfort, and the absence of proper food, fresh air, and exercise, do not tend to foster either health or endurance; consequently, while we deprecate the inconsiderate zeal of those who would forego the use of corporal punishment altogether, we readily admit the reasonableness of the precautions above mentioned.

DEATHS OF EMINENT FOREIGN MEDICAL AND SCIENTIFIC MEN.

THE deaths of the following foreign medical and scientific men are announced:—Señor Don Juan Garcia de la Linde, a well-known Spanish writer and clinicist.—Dr. Don Rafael Lasso de la Vega y Chinchon, a well-known practitioner in Seville.—Dr. Don Enrique Amell y Robert, a Barcelona laryngologist.—Dr. Don José Maria Fernandez y Cárceles, a distinguished practitioner in Madrid.—Dr. O. S. Jensen, the anatomist of Christiania.—Dr. Karl Haller, Emeritus Primararzt of the Vienna Hospital, at the age of seventy-eight.—Dr. Emil Szöts, director of the Clausenburg Hospital. — Professor Tsênkovski of Kharkoff, who has recently made a number of valuable observations on the Siberian sore.

NEPHRITIS IN SCARLATINA.

DR. HAZE states, in a report on the scarlet fever cases treated in the Elisabeth Children's Hospital in St. Petersburg during last year, that out of 145 such patients, 19, or 13·1 per cent., suffered from nephritis. This is a rather smaller proportion than the average of several years, tending to show some diminution in the number of kidney affections consequent on scarlatina; for during the years 1871 to 1886, out of 875 scarlet fever patients, 135, or 15·7 per cent., were found to be affected with nephritis.

THE ILLNESS OF THE ROYAL PRINCESSES.

WE are in a position to state that the Royal Princesses of Wales, who are suffering from an attack of measles, are progressing favourably. The disease is, we understand, in each case, pursuing a mild course, and an uninterrupted progress towards recovery may be confidently anticipated.

POISONING BY TOLUYLENDIAMINE.

IN poisoning by toluylendiamine, if the process be a lengthened one and lasting several days, Kiener and Engel have found that the urine, besides being jaundiced, and sometimes yielding hæmoglobin, likewise contains pigment granules, having iron in their composition, and probably derived from hæmoglobin ultimately. The ferruginous pigments deposited in the organs of the animals poisoned by sulphide of carbon led them to experiment on the effects of toluylendiamine. They believe that the iron pigments are more constant indications of the destruction of red blood discs than is either icterus or hæmoglobinuria. In rabbits on which experiments were made, icterus was always wanting; hæmoglobinuria was only observed once, but twice the pigmentary granulations were detected in the urine. In dogs the signs of destruction of the blood globules were not always present.

A WELL-FOUNDED COMPLAINT.

A CORRESPONDENT has directed our attention to the condition of waterclosets in railway stations. We have no hesitation in saying that many of them are a disgrace to those who are responsible for their control. In many instances they are without any external ventilation, and are allowed to be dirty to an extent that shocks those who are compelled to use them. The subject is one that urgently requires the attention of railway directors and of medical officers of health. Bad as they are, they could many of them be improved by the provision of openings for ingress and egress of air, and certainly no difficulty would be found in maintaining them in a reasonable state of cleanliness. If other grounds for urging this matter upon railway officials are required than those of decency, we may plead the serious detriment to health which occasionally results to travellers from their inability or unwillingness to enter offensive premises.

METROPOLITAN HOSPITAL SUNDAY FUND.

WE are glad to be able to record that the total amount received at the Mansion House towards this year's Fund is now £40,433 3s. This sum exceeds the total of any previous year. The financial year closes on October 31st.

CIRCULAR WARDS.

WE hear that Dr. C. Lange and Dr. Oscar Bloch, two well-known physicians of Copenhagen, are now in this country for the purpose of visiting and obtaining a practical acquaintance with the system of circular wards for hospitals. They will inspect the Miller Memorial Hospital at Greenwich, the Burnley Hospital, and the newly completed hospital at Hastings; so that Professor Marshall's prophecy, that this last-named and latest realisation of his idea will be visited even by foreigners as well as by our own countrymen anxious to examine into the merits of the circular system, has speedily become true. Dr. Lange is the active and courteous physician who was secretary to the International Medical Congress at Copenhagen, and, together with Dr. Bloch, has been appointed on a committee of inquiry to report on hospital construction, in view of the intended erection of a new hospital at Copenhagen.

SIR MICHAEL HICKS BEACH.

IT will be gratifying to the friends of Sir Michael Hicks Beach to learn that the health of the right honourable gentleman has been considerably improved by the change, rest, and treatment he has experienced. At a consultation recently held by Dr. Robson Roose and Mr. Critchett, it was found that the eyes had been considerably benefited, and that the general condition was such as to warrant the belief that, with due precaution, Sir Michael may safely resume his political duties. This result has fully justified the views expressed last March by his medical advisers.

THE SCHOOL BOARD AND SCARLET FEVER.

ACCORDING to a recent police-court report, it would appear that School Board visitors even summon parents whose children are absent from school because they are either themselves ill of scarlet fever or are living in a house where the disease prevails. Nothing could well tend to bring compulsory education into greater disrepute, and visitors should always be required to satisfy themselves that there is no infectious disease in the house of absent pupils before they proceed to enforce attendance.

LÆVO-ROTATORY SUGAR IN THE LIVER.

DR. PANORMOW has found in the liver a sugar-like substance which possesses lævo-rotatory power. He has not succeeded in isolating it. His observations, however, tend to show that Seegen was wrong in thinking that all the sugar in the liver is dextrose.

FOREIGN UNIVERSITY INTELLIGENCE.

Erlangen.—Dr. F. Hermann has qualified himself as *privat-docent* in Anatomy.

Marburg.—Dr. Hans Strahl has been nominated Extraordinary Professor.

Prague.—Dr. A. Obrzut has been granted the title of *Docent* in Pathological Histology in the Bohemian Faculty.

Würzburg.—Dr. Matterstock has been appointed to the Professorship of Medicine, vacant by the death of Dr. Geigel. Dr. Lehmann, assistant in the Hygienic Institute in Munich, has been appointed to lecture on Hygiene, which had been included in the deceased professor's duties. He is to have the title of Extraordinary Professor.

ON the 13th inst., Messrs. Harries jun. and Blakiston, the house-surgeon and assistant house-surgeon to the Salop Infirmary, were shooting rabbits about three miles from Shrewsbury, when Mr. Harries' gun accidentally went off and the charge struck Mr. Blakiston, who was about ten yards distant. The shot entered directly over the sacrum, within an area of six inches, and too deep for extraction. We are sorry to add that symptoms of peritonitis have since declared themselves, and Mr. Blakiston's condition is extremely critical, although during the past three days more hope of his recovery has been entertained than in the earlier part of the week. His temperature and pulse are low, and there is less tenderness and tympanites. Much sympathy is felt for both the sufferer and the accidental inflicter of the injury.

AN alarming outbreak of fever, resulting in a large number of deaths, is reported to have taken place among the British troops stationed in the Kazr-el-Nil barracks at Cairo. The immediate cause is said to be the infiltration of the Nile water in the barrack square. Much regret is expressed that the men were not removed from the infected building and placed under canvas.

PROFESSOR KIRCHHOFF, the celebrated scientist and discover of the spectrum analysis, died at Berlin on the 17th inst. He was born at Königsberg in 1824, and it is now exactly forty years since he went to the University of Berlin as a *privat-docent*. In 1850 he was called to the Chair of Physics at Heidelberg, where, in company with Bunsen, he carried on those researches which at last resulted in the discovery that at once raised him to the first rank of natural philosophers, and opened a new era in the history of chemical analysis. In 1875 Professor Kirchhoff went back to Berlin, where he was made a member of the Academy of Sciences.

DR. B. P. ROOKE, who died at Redhill on the 8th inst., at the advanced age of eighty-six, belonged to the old East India Company's Medical Service, which he entered as assistant surgeon in 1826 on the Bombay medical establishment. He became in due time head of the department, and retired in 1862 as Principal Inspector-General of Hospitals. He served on Lord Keane's staff throughout the Afghan war in 1838-39, was present at the taking of Ghuznee, and obtained a medal. Dr. Rooke was honorary physician to the Queen.

MR. RICHARD BERRIDGE, late of Ballynahinch Castle, Galway, Knowlehall, Bridgwater, and the Cedars, Putney, has by his will bequeathed the sum of £200,000 in trust "for the advancement and propagation of education in economic and sanitary sciences in Great Britain."

THE Government inquiry into the sanitary condition of Bethnal-green was resumed on Wednesday last, when Mr. Shirley Murphy and Mr. Cubit Nichols, the commissioners, commenced their investigations of the state of some of the poorer parts of the district.

THE *London Gazette* of Oct. 18th announces the appointment of James Cecil Phillippo, Esq., M.D., as a Member of the Privy Council of the Island of Jamaica.

A MEETING of the General Medical Council will be held on Tuesday, November 22nd.

PERSONAL REMINISCENCES OF THE LATE PROFESSOR VON LANGENBECK.

WE have received the following sketch of the great surgeon, which has been furnished us by the two surgeons intimately acquainted with him during the period referred to.

It was in the early part of December, 1870, that the writers of these brief reminiscences became intimately acquainted with Professor and General-arzt von Langenbeck. It was in Orleans, and at the period of the Franco-German campaign when the active operations of war were centred in and concentrated around this city. We may briefly recall the state of Orleans at this period. The city had been captured by the Bavarians on Oct. 11th, after four days' very heavy fighting; was recaptured by the French after the battle of Coulmiers on Nov. 9th, when General von der Taun, commanding the Bavarian army, effected a strategic retreat in face of a very superior force, and wisely fell back on the main body of the German army, now closely besieging Paris. Meanwhile, Metz had capitulated on Oct. 25th, and thus set free the armies of Prince Frederick Charles and the Grand Duke of Mecklenburg. These armies, advancing by a series of rapid marches, effected a junction with Von der Taun, when a general advance was again made on Orleans, the three armies marching in separate bodies, the whole forming a huge horseshoe line some sixty miles in extent, its extreme right resting upon Pithiviers, and its left upon Bellegarde and Montargis. After some very heavy fighting

the city was finally reoccupied by the Germans on Dec. 5th. As a result of this continuous fighting, the city had become crowded with wounded of both armies, and at this date was a very charnel-house. Churches, barracks, schools, convents, railway station, a large number of private houses, and indeed every available building, had been converted into an extemporised hospital. Every preparation had been made for the reception of the wounded, and it was fortunate that this was so, for the severe fighting of the few previous days had made a further demand on the resources of the place. The nurses of the various German and French nursing aid societies, assisted by the Sisters of the convents and by a large staff of lady volunteers, had by this time become familiarised with their work and efficient in their duties. Luckily there was no lack of surgical appliances and dressings, for the volunteer societies of various nationalities, recognising the urgent necessities of the wounded, and regarding Orleans as the base for further military operations, had richly equipped the hospitals, permanent and extemporised, with all needful material. This condition of preparedness put the city more in the position of a capital endowed with permanent hospitals, and permitted of the surgical work being performed in a more scientific, careful, and accurate manner than usually obtains in the history of warfare. The surgical staff was now considerable, for, in addition to the large number of German surgeons, and a few French army surgeons, nominally prisoners, there were volunteer ambulances officered and equipped by men from England, America, Switzerland, Holland, and other countries. At this period Langenbeck arrived amongst us with the head-quarters staff of the 3rd Prussian Army. We, as Englishmen, were much impressed by the marked deference everywhere shown to him by his professional brethren of all ranks and ages, whether by his countrymen or surgeons of other nationalities. From early morning until late in the evening his services were in constant request, both as consultant and operator; he was in demand everywhere, and did not spare himself even at his age. Ever careful, ever jealous of the interests of others, and more especially of juniors, he would only consent to perform operations at the special request of the particular surgeon in charge of the case. His especial skill in the performance of subperiosteal resections was so well known that he was most frequently called upon to perform them. More especially in connexion with these operations his extraordinary capacity as a clinical teacher asserted itself, and soon a numerous and attentive clinique followed him. Our special and peculiar intimacy with him dates from one of these most interesting cliniques. He was performing a subperiosteal resection of the shoulder joint, when, the knives at his disposal being considerably the worse for wear and tear and the rough usage to which they had recently been subjected, turning round to his assistant, he said, "Dieses Messer ist nicht scharf." Fortunately we were able to offer him an English-made scalpel in good condition, an attention with which he was much pleased, and which he never subsequently forgot; for during war time, when instruments are in constant use and there is no one skilled in sharpening, or indeed anything on which to sharpen them, a keen knife becomes of almost priceless value.

Langenbeck, deeply impressed with the importance of the many debatable and moot points in military surgery, facts towards the elucidation of which were constantly coming under the observation of the surgeons around him, urged the desirability of establishing a Surgical Society; it was mainly owing to his intense activity and great personal influence that a "Militair-Aertzliche Gesellschaft" was organised, which held its first setting on Dec. 23rd, within eighteen days of the occupation of the city by the Prussians. Professor von Langenbeck was unanimously elected its president, and Dr. Gaehde its secretary. At its first sitting it was resolved: "That its meetings should take place every week at half-past eight on Wednesday and Saturday evenings; that all German and foreign colleagues be invited to take part in the proceedings, and that each be allowed to speak in his mother tongue." Professor von Langenbeck's introductory address was on the subject of Prophylactic Tracheotomy in cases of Gunshot Injuries of the Larynx, even though there might be no urgent dyspnœa. He was induced to select this subject from the fact that he had seen in the action near Pithiviers, a few days previously, a dragoon who had been wounded in the region of the larynx suddenly die from asphyxia, due to œdema of the glottis, though apparently not dangerously injured; it was a subject in which he had long taken a deep interest, his experience dating as far back as the year 1848. Various other cases were related by those present, amply confirmatory of Langenbeck's experience. Amongst many interesting subjects of discussion the following occur to us:—"Gunshot Injuries of the Hip Joint, and their treatment by Resection"; "Traumatic Infiltration, Hæmorrhagic and Inflammatory"; "Gunshot Injuries of the Knee Joint, and their Conservative Treatment"; Gunshot Fractures of the Thigh, with relation to their early and late treatment and modes of transport"; "Pyæmia"; "The Relative Effects produced by Rifle Bullets"; "Ligature of Arteries"; "Wounds of Pelvic and Abdominal Viscera"; "Hospital Gangrene"; "Epidemic Cerebro-spinal Meningitis"; "On Methods of Amputation." In the discussion on this last subject Dr. Gaehde remarked upon the conservation of the periosteum and upon the advantage of making periosteal flaps as a protective cover for the end of the bone, and as considerably diminishing the risks of osteo-myelitis and of sloughing of the flaps. Various specimens of bullets were brought forward by Dr. Müller as affecting the question of explosive charges, constituting a breach of the Convention of St. Petersburg. Thus it will be seen that the proceedings of the society embraced a wide range of subjects; the discussions were supplemented and illustrated by pathological specimens, drawings, and bullets altered in form by contact with various parts of the body. These enjoyable meetings continued twice a week until the end of February. Amongst the best remembered names of those attending the society were Dr. Loeffler, Dr. Müller, Dr. Bock (a former assistant of Dr. Frerichs of Berlin, who soon after succumbed to typhoid fever), Dr. von Montmollin of Geneva, Dr. Senator, Dr. Metzler, Dr. Fritsch, Dr. Fuchs, and Dr. Landsberger. We must not omit to mention the great personal share that Langenbeck took in the proceedings of this society, nor that its success was mainly due to the enthusiasm evoked by his presence and example.

It is difficult to estimate the actual number of subperiosteal resections which Langenbeck performed during his stay in Orleans; a day rarely passed for a period of many weeks without his performing an operation on one or other joint. Though often at this time and at a later period conversing with pleasure and pride on the large number of successful resections that he had performed in his various campaigns, he never forgot to award a due meed of praise to Heine, who was the first to demonstrate their value on dogs; nor to Flourens and Ollier, who were the first, or amongst the first, to perform these operations upon the living subject. It must not be supposed from the number of operations performed that Langenbeck was a mere operator, for he never failed to inculcate by precept and example the essential importance of careful after-treatment, continued even for long periods; and was most particular in recording the final result of all cases on which he operated whenever it was possible for him to do so.

At the conclusion of the war, in obedience to the command of the Emperor, Professor Langenbeck made a tour of inspection of the principal hospitals in Germany, permanent and temporary, occupied by the wounded. He very kindly invited us to accompany him as his assistants—an invitation that we gladly and gratefully accepted. Commencing with Strasburg, we gradually made our way to Berlin, visiting, amongst other places, Carlsruhe, Heidelberg, Stuttgardt, Mannheim, Darmstadt, Frankfort, Homburg, Wiesbaden, Mayence, Ems, Rüdesheim, Bingen, Coblenz, Bonn, Cologne, Elberfeld, Düsseldorf, &c. We have before said that Langenbeck was not a mere operator, and this journey with him gave us the opportunity of seeing the extreme interest that he took in his final results. The minuteness and care with which each case was examined and noted proved Langenbeck to have sympathies and interests far beyond the mere mechanical act of operating. It was during this tour that Langenbeck collected much of the material which, later, formed the basis of his Chirurgische Beobactungen aus dem Kriege, Ueber die Schussverletzungen des Hüftgelenks, Ueber die Endresultate der Gelenkresectionen im Kriege. This journey had an especial charm for him, for in almost every hospital in every town he found either an old pupil or assistant glad to welcome him, and whose clinical successes, as seen by us, testified to the excellent teaching of his old master.

Although cheered by the hearty welcome which greeted

him on all sides, whether by old pupils now occupying prominent positions, by friends of all ranks of society, including numerous Royal personages, who showed him the highest consideration, yet to us, his constant companions, there was the shadow of his great grief, which gradually deepened as he approached his home in Berlin; for it will be remembered that he had lost a favourite son, a promising young officer of the Rifles of the Guards, who had fallen at Gravelotte while gallantly leading his company. Almost immediately after his arrival in Berlin he resumed his hospital duties at the Royal Universitäts Klinikum, where his clinic was crowded. He was soon overwhelmed with private practice; in addition to the number of patients who had awaited his return, large numbers of wounded officers were daily flocking to Berlin to have the benefit of his skill and advice, many of them with wounds of the face requiring more or less repair by plastic operation, a class of cases in which he took especial interest, and in which he pre-eminently excelled. In addition to his private work, he held a class of operative surgery on the dead subject, which was largely attended by students and military surgeons returning from the front; this class was held from 6 A.M. to 8 A.M. The remainder of the morning was devoted to consultations and operations in private. He was due at his clinic at 2 P.M., but arrived half an hour before that time for the purpose of receiving in his private room the visits of private friends, military surgeons, medical men with special introductions, and arranging with his assistants (at this time Drs. Busch, Trendelenburg, and Bose) the order in which the various cases sent to him should be brought forward in the clinic. At 2 o'clock precisely he entered the theatre, wearing a specially made tightly-fitting coat of black material (scrupulously cleaned for each day); here he examined students most carefully, demonstrated the cases, and performed any necessary operation. We know of no other hospital in Europe where richer pathological and operative material was at the disposal of any one single surgeon than that over which the late von Langenbeck then presided.

He was fluent of speech, possessed of sympathetic voice, great charm and impressiveness of manner, with a most intimate knowledge of every detail of his subject, and produced an effect upon his hearers which no pen can adequately describe. As an operator he was in the very first rank, original, bold without recklessness, and of great anatomical knowledge. Of endless zeal and untiring industry, Langenbeck combined in himself all the elements which go to make a good surgeon and teacher, and there are few men who have left a deeper impress on the surgery of their time, not merely by reason of his own individual work, but indirectly through those who were his pupils, and are now so worthily occupying leading positions in the Universities throughout Germany. An aristocrat in appearance, manner, and feeling, modest in demeanour, the trusted friend and councillor of his Sovereign, revered and esteemed by all classes of society, the friend of all and enemy of none, his country will long mourn a loss which will also be felt throughout the empire of surgery.

THE HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.

The new Hastings, St. Leonards, and East Sussex Hospital, situated at White Rock-place, Hastings, was formally opened on the 13th inst., by Mr. Wilson Noble, M.P., in the presence of a large and influential gathering.

The new building occupies the site of the first structure, finished in 1841. It stands immediately opposite the pier, facing the sea, in a warm and sheltered position, and is externally of somewhat striking architectural appearance, being built of red brick, with white stone dressings, and presenting on either wing two massive circular wards, with open-air balconies on top, and central ventilating and chimney shafts. The structure is in four storeys, the basement being utilised as store-rooms, larder, heating chamber, &c., and the entire upper floor being for the domestics and female staff of nurses, containing kitchen, pantry, and offices. All the cooking is done by gas, and the building is heated throughout by hot water. The communication is by electric bells. The ground floor and the second and third floors contain the wards for patients and various apartments for the administration and staff. The accommodation is designed for seventy-two beds, and five cots for children, the total area covered by the new hospital being about 210 feet frontage, and from 50 ft. to 60 ft. in depth. Three circular wards in the eastern wing give on each floor accommodation for twelve patients, and on the western wing there are two similar wards with twelve beds in each. All the newest appliances for the comfort of the patients and the convenience of the domestics have been adopted by the committee of the hospital, and supplied by the builders. The total cost of the structure is about £19,500, and the debt before the day of opening was £3700, which by the collections and subscriptions on the 13th inst. has been reduced by £600. The memorial stone of the new building was laid by Lord Brassey, on Aug. 24th, 1886. Entering the building by the main entrance, through the outer porch, a small entrance hall is reached. In front of this is the main staircase, and close to the staircase is a lift for taking the cooked food from the kitchen to the wards, and other domestic uses. The central portion of the structure on the ground floor is devoted to the administrative department. On the west, facing the front line, is the committee room, a noble apartment, well lighted. Adjoining is the secretary's office. Beyond is the reception hall for the out-patients, with rooms for the physicians and surgeons, and a consulting room. Close to the reception hall is the dispensary, with the dispensing table. All these rooms are admirably adapted for their purpose, and plainly furnished. On the east side of the staircase, on the same floor, is a splint room, a duty room for No. 1 ward, and some cupboards, &c. The apartments for the house surgeon (a bed and a sitting room) are on this floor, facing south. No. 1 ward occupies the ground floor, on the eastern wing, and a description of it applies to all the circular wards in the establishment. Its diameter is 41 ft. and its height 13 ft. 6 in., the ceiling sloping slightly upwards towards the centre, with large windows, and has floor space for twelve beds. Three fireplaces occupy three sides of the sexangled shaft which rises through the various circular wards, built so as to provide ventilation as well as to convey away the smoke from the fires. The heads of the beds are placed to the wall. In the rear of the ground floor, and detached from the main building, is a casualty room for the reception of accident cases; also an operating room. These rooms are reached by the exterior passage from the front street or the rear entrance. There is also a mortuary and a post-mortem room, with closets and other offices for the use of out-patients. On the second floor the south side is occupied with the matron's apartments (bed and sitting room), three small wards, and a men's day room. On the north side is the duty room, linen room, and others. At each end of this floor is a circular ward, approached by an open arcade, thus detaching the ward, when desired, from the main building. This arcade leads to an open-air balcony, facing south, for patients to take the air in warm weather. Opening out of the circular wards, and to the rear, are closets, bath room, &c. A spacious corridor runs along the structure from east to west, connecting the wards at each end. On the third floor is No. 4 ward (east end) and No. 5 ward (west end), fitted up and designed similarly to those below. Close to the entrance to these wards, at each end, is a staircase leading to an open-air platform on the exterior top of the wards, where the patients may rest and walk about, enjoying the sea breeze and the animated scene along the esplanade. On these platforms, in the open air, are five screened seats, placed against the chimney shafts, and well covered in, so as to give protection from wind and rain. The women's day room, the nurses' bedrooms, and the children's ward (for five or six cots) are on this floor. On the fourth floor is the kitchen department. The apartments for the servants and nurses are also on this floor.

Mr. Noble having formally declared the building open,

Professor MARSHALL, F.R.S., President of the General Medical Council, said the English people were proverbially known as a practical people, but yet they had there evidence that they were not altogether destitute of a feeling for the ideal, because only a short nine years ago a circular hospital existed only in idea. In 1878 he had published an original paper on this subject, and now the people of Hastings and its neighbourhood had joined with many others in endeavouring to carry out his suggestions. Here, for a second time in England, a large hospital with circular wards was now opened; and here, in the realisation of his plan, pre-

tical ladies and gentlemen asked him to come forward and assist them in opening this actual building. The idea of a circular hospital was founded, first of all, on a geometrical notion that would commend itself to everyone. A circular hospital, in the first place, with a certain "run of wall"—to use an architectural phrase—gave them a larger enclosed space to deal with than any other form which might be conjectured. If they converted this "run" into a square, they had a smaller area, and they could not get the same amount of space within a triangular or any other form as in a circular construction. What did that mean? It meant that they had included a certain larger amount of air, and, as that was the very life breath of a good hospital, they had, by adopting the circular form, more air for their sick patients to breathe than they could have in any other form of building included within the same amount of wall. Then, again, the advantage of a circular ward was that it fell away from all surrounding objects, and they had a sweep of air around their building. Round a circular building they would have a freer circulation of air than they would about a square one. Next, in regard to light: in a circular ward they had light all round; and light, as they knew, was one of the most beneficent agents in nature. It had been shown by Dr. Downes, the medical officer of Colchester, that if you placed fluid in glass tubes for the development of bacteria, and in one case covered up the tubes, and in the other left them open and exposed to the sun, whilst the covered ones would develop innumerable bacteria, the others would scarcely develop any, or none at all. Abundant light, therefore, was essential in every ward. They might equal, but they could not possibly exceed, the quantity of light they could get into a building by the circular form. He did not say they could not accomplish a similar amount of light in a rectangular ward, but a circular ward received the light, as a matter of course, from every point, whether direct from the sun or reflected from the clouds. So much, then, for light. Then came the question of ventilation, which was one of the great problems of the scientific man, of the physician, and of the architect. Was there a public building in this country in regard to which they would get everyone to agree that it was a perfectly ventilated building? He knew of none, but the nearest approach to it was in the circular ward, for the simple reason that it was exposed at all points, and whichever way there was a pressure of air, they were sure to receive the advantage. The circular form, without any contrivance or thought of intricate arrangements, distributed the wind, and weakened and modified any great pressure. From without, the currents of air entered at different angles, and with different force at different windows; whilst within, these converging streams were deflected from the internal curved surface and caused whirling movements, the tendency of all being towards the ventilating openings in the centre, to which they were conducted by a slight coving of the ceiling in an upward direction. For ventilating purposes, therefore, the building needed but little subsequent thought; it required certain openings, and the whole process went on automatically and gently by night and day without any complicated contrivances. On the question of artificially heating a ward, it was easy to understand that with a central or a circumferential source of heat, or with both, a circular space could be more equably warmed than an oblong one. Then, again, there was something pleasant about a circle, even in internal appearance and aspect. For several reasons a bay window was a more agreeable thing in a house than a flat one. In a long parallelogram patients were placed near their opposite neighbours, and were doomed to look out upon the same buildings, the same smoke, a constant similarity, a sameness of aspect; whereas in a circular ward, they were further apart, and, if they simply turned their heads, were struck with something fresh and genial. Lastly, let them take administration. Could anything be better than a circular ward in that respect? They had the patients ranged round, and the attendants moving in the centre. Everyone could be seen and heard; the conveyance of medicine and food, of apparatus and dressings, was facilitated; and that was an obviously incidental merit. As he had said, he was addressing a practical people, and therefore they would ask if he could give them any instance of success in regard to the building or working of a circular hospital? The largest building of the kind in England was at Burnley, in Lancashire, and there, after twelve months' experience, everything was found to answer admirably. In support of this statement, he would read three letters which he had received from his friend Dr. Brown of that busy and populous place. He could only say, in conclusion, that he wished success to this undertaking. It would give him extreme pleasure now and then to come and visit the hospital, and see how they were getting on. He prophesied that it would be much visited both by their own countrymen and by foreigners interested in hospital construction. He was delighted to have had the opportunity of being present that day, and of encouraging them, after all the troubles of which he had heard. Excepting here and there little modifications such as experience would dictate to them, they had a fine building, which would do well the work which was required of it. He should wish to add that great credit must be awarded to the enterprise and adaptive ingenuity evinced by the architects, Messrs. Young and Hall, and to the watchful care of Dr. Bagshawe and his fellow committeemen.

Following the ceremony at the hospital, a public luncheon, which was largely attended, was served at the Royal Concert Hall. At this meeting the Bishop of Chichester, with Professor Marshall's concurrence, spoke warmly of the advantages of the open balconies in front of the building, and of the platform with its sheltered seats on the top of each circular tower.

CALENDAR OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FROM the Calendar of this institution, which has just been published by the Council, it appears that 20,067 qualified practitioners are now inscribed in the College roll—viz., 1116 Fellows, of whom 664 obtained this distinction by examination, 8 were elected as Members of twenty years' standing under Section 5 of Charter 15 Vict., and 2 are *ad eundem* Fellows. There are 17,377 Members and 957 Licentiates in Midwifery (the examination for this licence has been suspended for the last twelve years). The Licentiates in Dental Surgery number 617.

The examiners in Elementary Anatomy and Physiology, appointed in conjunction with the Royal College of Physicians under the Scheme for an Examining Board in England, are elected annually. There have been four examinations during the past year, 685 presenting themselves in Anatomy and Physiology, of whom 528 passed in both subjects, 87 in Elementary Anatomy, and 34 in Elementary Physiology; 36 candidates were referred in both subjects; 64 candidates presented themselves in Elementary Anatomy, 56 of whom passed and 8 failed; 86 presented themselves in Elementary Physiology, of whom 68 passed and 18 failed. The fees derived from candidates for this examination amounted to £3940 13*s.*, the examiners receiving in fees £564 15*s.*

The examiners in Anatomy and Physiology, appointed in conjunction with the Royal College of Physicians under the scheme for an Examining Board in England, are elected annually. They have conducted the "Primary" Examination under the old regulations, as well as the Second Examination of the Examining Board, and have held during the year four examinations, at which 937 candidates presented themselves for examination in Anatomy, of whom 558 passed and 379 were referred; 854 candidates presented themselves in Physiology, of whom 515 passed and 339 were referred. The fees paid for these examinations by candidates amounted to £4713 19*s.* 6d., the examiners receiving in fees £2064.

The Board of Examiners in Anatomy and Physiology for the diploma of Fellow consists of nine members annually elected by the Council from the Fellows of the College, and has held during the past collegiate year two examinations. At these 142 candidates presented themselves, of whom 75 passed and 67 were referred. The fees paid in connexion with these examinations amounted to £1065 15*s.*, the Board receiving in fees £639.

The Court of Examiners consists of ten members elected by the Council from the Fellows of the College (all of whom, however, are members of the Council except Mr. John Langton, Mr. T. Pickering Pick, Mr. H. G. Howse, and Mr. W. M. Baker). They have conducted the Third or Final Examination of the Examining Board, as well as the Pass or Final Examination under the old regulations, and the Pass or Final Examination for the Fellowship. During the year the Court has held two examinations for the Fellowship and

five for the Membership; at the former there were 58 candidates, 31 of whom passed, 18 being referred for one year and 9 for six months. For the Membership there were 1083 candidates, of whom 267 obtained their diplomas, and 302 passed in surgery only; 143 were referred for three months, 326 for six months, 23 for nine months, and 22 for one year. The fees paid to the Court of Examiners amounted to £6329 16*s.*; the fees paid by the candidates reaching £12,845 9*s.* 6*d.*

The Board of Examiners in Dental Surgery has held three meetings for the examination of 37 candidates, 28 of whom received their diplomas. The fees paid by them amounted to £294, of which the Board received £88 4*s.*

The income of the College from all sources during the past year amounted to £35,372 6*s.* 2*d.*, derived principally, as already shown, from fees paid by candidates for the diplomas of the College—viz., £22,859 17*s.* Rents from chambers adjoining the College produced £2020 4*s.* 8*d.*; dividends on stock, £803 10*s.* 10*d.*; from members of the Council and Court of Examiners on their election, £84; election to Fellowship, £10 10*s.*; sale of stock, £8617 10*s.*; from trust funds, sale of Calendar and Synopsis, &c., £976 13*s.* 8*d.*

The expenditure for the year amounted to £33,742 14*s.* 7*d.* (leaving a balance at the bankers of £1742 14*s.* 7*d.*), the largest item being for the Savoy Estate, £11,852 11*s.* 9*d.*; the next largest amount appears in fees paid to examiners, £9685 15*s.* Salaries, wages, and pensions for officers and servants of the College in the three departments, library, museum, and office, amounted to £4585 8*s.* 4*d.*; taxes, rates, diploma stamps, and insurance absorb the sum of £1901 12*s.* 5*d.*; half expenses for Examination Hall, £651 2*s.* 8*d.*; under miscellaneous items, extraordinary expenses, alterations, repairs, fuel and light, printing and stationery, about £4000 appears to have been expended.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5312 births and 3151 deaths were registered during the week ending October 15th. The annual rate of mortality in these towns, which had been 17·5 per 1000 in each of the preceding two weeks, rose last week to 17·8. During the thirteen weeks of last quarter the death-rate in these towns averaged 20·4 per 1000, and was 0·5 below the mean rate in the corresponding periods of the ten years 1877-86. The lowest rates in these towns last week were 14·2 in Leicester, 14·4 in Oldham, 14·7 in Leeds, and 15·0 in Brighton and in Derby. The rates in the other towns ranged upwards to 23·2 in Bolton, 24·0 in Preston, 24·5 in Manchester, 26·8 in Blackburn, and 27·1 in Plymouth. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 460 and 412 in the preceding two weeks, further declined last week to 382; they included 124 from scarlet fever, 68 from diarrhœa, 50 from measles, 53 from "fever" (principally enteric), 50 from whooping-cough, 29 from diphtheria, and 8 from small-pox. These zymotic diseases caused the lowest death-rates last week in Huddersfield, Plymouth, and Newcastle-upon-Tyne; and the highest rates in Preston, Blackburn, and Bolton. The greatest mortality from scarlet fever occurred in Birkenhead, Manchester, Bristol, Bolton, Preston, Halifax, and Blackburn; from "fever" in Oldham, Nottingham, and Preston; from measles in Derby and Bolton; and from whooping-cough in Halifax. The 29 deaths from diphtheria in the twenty-eight towns included 22 in London and 2 in Wolverhampton. Small-pox caused 8 deaths in Sheffield, but not one in Greater London or in any of the twenty-six other large towns. Only 5 cases of small-pox were under treatment on Saturday last in the metropolitan hospitals receiving cases of this disease; whereas the number of cases of scarlet fever in the Metropolitan Asylums Board hospitals and in the London Fever Hospital had increased to 2159. The deaths referred to diseases of the respiratory organs in London, which had ranged in the preceding four weeks from 142 to 219, further rose last week to 280, but were 9 below the corrected average. The causes of 72, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Portsmouth, Brighton, and in eight other smaller towns. The largest proportions of uncertified deaths were recorded in Newcastle-upon-Tyne, Blackburn, Sunderland, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·7 and 18·1 per 1000 in the preceding two weeks, further rose to 19·3 in the week ending October 15th; this rate exceeded by 1·5 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 13·7 and 16·1 in Aberdeen and Edinburgh, to 23·4 in Glasgow and 24·3 in Perth. The 483 deaths in the eight towns last week showed a further increase of 30 upon the numbers returned in recent weeks, and included 30 which were referred to whooping-cough, 23 to scarlet fever, 14 to diarrhœa, 7 to diphtheria, 5 to "fever" (typhus, enteric, or simple), and not one either to small-pox or measles; in all, 79 deaths resulted from these principal zymotic diseases, against 71 and 74 in the preceding two weeks. These 79 deaths were equal to an annual rate of 3·2 per 1000, which exceeded by 1·0 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 23 and 17 in the previous two weeks, rose last week to 30, of which 10 occurred in Glasgow, 7 in Greenock, 5 in Edinburgh, 3 in Dundee, and 2 in Leith. The deaths from scarlet fever, which had been 11, 12, and 19 in the preceding three weeks, further rose last week to 23, and included 8 in Glasgow, 7 in Dundee, and 3 in Perth. The 14 deaths attributed to diarrhœa, of which 5 occurred in Glasgow and 4 in Leith, showed a further decline from recent weekly numbers. The 7 deaths from diphtheria corresponded with the number in the previous week, and included 5 in Glasgow. The 5 deaths referred to "fever," of which 3 were recorded in Paisley and 2 in Edinburgh, showed a further decline from the numbers returned in the preceding two weeks. The deaths attributed to acute diseases of the respiratory organs in the eight towns, which had been 83 and 78 in the preceding two weeks, rose again last week to 83, but were 15 below the number returned in the corresponding week of last year. The causes of 54, or more than 11 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 30·9 and 24·2 per 1000 in the preceding two weeks, rose again to 27·3 in the week ending October 15th. During the thirteen weeks of last quarter the death-rate in the city averaged 31·0 per 1000, the mean rate during the same period being but 19·6 in London and 18·2 in Edinburgh. The 185 deaths in Dublin last week showed an increase of 21 upon the number in the previous week; they included 11 which were referred to scarlet fever, 9 to diarrhœa, 7 to "fever" (typhus, enteric, or simple), 6 to measles, 2 to whooping-cough, 1 to diphtheria, and not one to small-pox. Thus the deaths resulting from these principal zymotic diseases, which had declined in the preceding eight weeks from 78 to 29, rose again last week to 36; they were equal to an annual rate of 5·3 per 1000, the rate from the same diseases being but 2·0 in London and in Edinburgh. The 9 deaths attributed to diarrhœa showed a further decline from recent weekly numbers. The 11 fatal cases of scarlet fever, however, showed an increase, and exceeded the number returned in any previous week of this year; the deaths referred to "fever" also showed an increase upon recent weekly numbers. The fatal cases of measles, whooping-cough, and diphtheria corresponded with the numbers in the previous week. The deaths of infants showed a decline, while those of elderly persons were more numerous. Seven deaths from violence, but only two inquest cases, were registered; and 43, or nearly a quarter, of the deaths occurred in public institutions. The causes of 23, or more than 12 per cent., of the deaths registered during the week were not certified.

AT a meeting of the members of the Redcar and Saltburn Local Boards, on the 14th inst., it was decided that it was advisable to provide hospital accommodation for cases of infectious disease occurring in the said districts, and a committee was appointed to find a suitable building or site for a building.

Correspondence.

"Audi alteram partem."

THE RECENT HONOURS EXAMINATIONS AT THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—You were good enough some months ago to allow me to draw attention in THE LANCET to the new regulations introduced in 1887 with respect to the Honours Examination at the Intermediate Bachelor of Medicine Examination of this University. With your permission, I would now draw attention to the results of the examination in July last, the first under the new regulations. The examinations for honours were in the four subjects of the pass examination—viz., in Anatomy, Physiology, Chemistry, and Materia Medica. The total number of places obtained in the honours list was 18 only, obtained by 13 individuals.

	1st class.	2nd class.	3rd class.
Anatomy	1	1	1
Physiology	2	2	3
Chemistry	1	1	0
Materia Medica	0	4	2
Totals	4	8	6

The places were distributed among the various schools as follows:—University College obtained 7 places; St. Thomas's, 4; St. Bartholomew's, 3; Owens College, 2; London Hospital, 1; Edinburgh University, 1. The other schools do not, I fancy, appear on the list. If we neglect the numbers of those who passed in the second division, as well as those who omitted one of the subjects of examination, we find in the first division 22 names, distributed among the schools as follows:—Guy's, 6; St. Bartholomew's, 4; London, 2·5; St. Thomas's, 2; London School of Medicine for Women, 2; St. George's, 1; St. Mary's, 1; Newcastle, 1; Queen's and Mason's Colleges, 1; University College, 0·5. The disproportion between these numbers and those in the honours list is marked. It is unlikely that those whose names are in the first division were all of them inferior in point of attainments to those who obtained honours. It is much more likely that the majority were afraid to risk being plucked for the chance of getting into the more honourable list. Although naturally wishing that my pupils should obtain honours, I have refrained from urging them to compete under the present conditions, knowing that the medical student, as a rule, cannot afford to be delayed a year by a rejection at his Intermediate Bachelor of Medicine or any other examination which is not absolutely avoidable. I cannot help fancying that others have been similarly influenced.

In bringing this letter to a close, I may add that my dislike to the new regulation is shared by all the teachers (with one exception) with whom I have been in communication on the subject since I wrote to THE LANCET at the beginning of the year, and that they, as well as many students, have expressed hopes that the annoying restrictions will be abolished.—I am, Sirs, yours very truly,

VINCENT D. HARRIS, M.D. Lond., F.R.C.P.

Wimpole-street, W., Oct. 1887.

THE PROTECTION OF LEICESTER BY VACCINATION.

To the Editors of THE LANCET.

SIRS,—In your issue of last Saturday appears a letter from Mr. Biggs on the "Protection of Leicester by Vaccination," in which some reference is made to me. I have neither the wish nor the intention of entering upon a discussion through the press upon this subject, but I desire simply to correct certain misstatements and erroneous conclusions contained in the letter alluded to.

1. "That out of nearly a dozen persons who came in contact with the last case of small-pox here, two only submitted to revaccination." As far as my knowledge goes, the persons who came in contact with this patient after the eruption appeared and it was known to be small-pox were the medical officer to the Union Infirmary, the attendant on him there, myself, the porter at the small-pox hospital, and the two nurses who attended him there; one of these latter had had small-pox; the remaining five persons were all protected by revaccination. A man who had slept on the bed the patient occupied before going to the workhouse, and before the eruption showed itself, was also for safety revaccinated. The sanitary inspector who disinfected the room he occupied &c. was also protected by revaccination.

2. "That the health reports of Leicester prior to 1886 say nothing of the practice of revaccination." Inquiry from the late medical officer of health or from the inspectors would have supplied the information that this was done whenever the persons exposed to infection permitted, but this, like isolation in hospital, cannot be compulsorily enforced.

3. That my 1886 report "has given rise to all the misrepresentation" can be disproved by your Commissioner, whose article was, I imagine, based on much wider data than that.

4. That "the sanitary staff consists of one chief inspector, three sub ditto, one office clerk, and the officer of health. Of this number the chief inspector, one sub-inspector, and the clerk have not been vaccinated since infancy, and the protection must have ceased long ago." The last statement you have dealt with in your remarks. Respecting the staff, I would say the clerk never leaves the office, and has nothing to do with any case of infectious disease, and is an old man upwards of sixty years of age. The chief inspector has only been in office four years, and he himself comes scarcely at all in contact with any of our cases of infectious disease, this devolving upon the sub-inspector in whose district the case occurs. Moreover, he had good cicatrices of primary vaccination. The sub-inspector alluded to as not being revaccinated has been appointed scarcely two years, and has never yet had to do with a single case of small-pox. He has good vaccination marks, but it is more from oversight than anything else he has not yet been revaccinated, which he intends to have done promptly on the first occasion of having to deal with small-pox, but probably before waiting for that. The sub-inspector whom he succeeded, and who had often to deal with small-pox, was *vaccinated* and *revaccinated*. A most important member of the staff has been omitted from the above list altogether—i.e., the man who disinfects all the infected rooms, houses, &c.; he is vaccinated and revaccinated.

5. "That the nursing staff at the hospital consists of the matron and two nurses. Of these, the matron has not been vaccinated since infancy; one nurse nineteen years since revaccination; the other revaccinated unsuccessfully, and contracted small-pox immediately after. An experience unique and interesting." To that I would say that the nursing staff consists at present of a matron and six nurses, but at the time referred to I believe we had six or eight nurses. All who at the time had not been revaccinated or had small-pox were then revaccinated immediately on the admission of the case of small-pox. The matron has not been revaccinated since childhood, but she had good cicatrices. Further, when a case of small-pox is in hospital she can scarcely be said to come in contact with it, as the small-pox building and nurses in charge thereof are carefully isolated from the rest of the buildings and inmates. The "nurse revaccinated nineteen years ago" would be revaccinated since puberty was reached, rendering her tolerably safe for life. The reference to the unsuccessfully revaccinated nurse is rather unfortunate for Mr. Biggs' argument. There is nothing unique in a person not revaccinated contracting small-pox. In this case the nurse was on duty at the Oldham Fever Hospital, where no small-pox had been admitted for some time, and several fresh nurses engaged in the interval had not then been revaccinated. A case came in; Dr. Sutton at once revaccinated those who had not been thus protected, but, not being able at the moment to obtain recent lymph, used some that had been in his possession a considerable time, and apparently become inert, for this, both in nurse and a servant, failed "to take," and in a fortnight both were suffering from small-pox. Further, the porter who refused revaccination also contracted it.

6. "That of four nurses since appointed, two only have been revaccinated since childhood." If it is meant since the last case of small-pox was admitted four nurses have been appointed, this is wrong: at least a dozen nurses have come and gone since then; but, having had no small-pox here, the question of revaccination has not been considered by me.

7. "That at the last admission of a small-pox case the

nurse attending was not revaccinated, although an assistant was operated on." The nurse in charge was the one just referred to as having passed through an attack of small-pox at Oldham, and was therefore well protected, the assistant nurse was successfully revaccinated by me before going on duty.

8. "That we have therefore ten persons who were in office at the time the report was made, *four of whom had never been vaccinated*, one in whom the protection had vanished. Of the remaining five, the most recent revaccination was performed two years ago." In the absence of any particulars, by the ten persons here referred to, I take it, are intended myself, the chief inspector, three sub-inspectors, the clerk, the matron, the two nurses who attended the case, and the porter; of these *all had been vaccinated*, and *all who came in contact with the patients were revaccinated*. I am, Sirs, yours faithfully,

HENRY TOMKINS,
Leicester, Oct. 18th, 1887. Medical Officer of Health.

JAMBUL IN DIABETES; SACCHARINE IN DIABETES.

To the Editors of THE LANCET.

SIR,—Mr. Hurry Fenwick's letter induces me to give you the results of the trial I have made of jambul powder in five cases of diabetes since the date of Dr. Kingsbury's letter to one of your contemporaries, used in doses of five grains, generally four times, in two instances three times, daily. All the patients were in the General Hospital under my care. I may say at once that no case was cured, but that all left the hospital more or less relieved by treatment, that all were carefully dieted, and that, besides the routine of diet, they were allowed potash imperial, sweetened with glycerine, to drink, and were in several instances treated by vapour baths. The effects of jambul were tested by maintaining uniformity of conditions in all other respects during the time the drug was employed or its use omitted. There were eight distinct trials in the five cases, five being followed by an increase of sugar and three by a decrease. Its disuse was followed on four occasions by a decrease and twice by an increase.

H. G——, aged thirty-five, was the only case in which the decrease was well marked. On admission he passed 250 oz. of urine containing 9200 gr. of sugar. After being placed on a diet of meat, greens, and gluten bread, and the urine observed for a week, he passed an average of 190 oz. daily, containing 4500 gr. of sugar. He then took 5 gr. of jambul three times a day for twenty-four days, during which time he passed on an average 140 oz. of urine containing 3500 gr. of sugar. The next week he took no medicine, and the urine fell to 104 oz., containing 2400 gr. of sugar. He was then given 1 gr. of opium twice daily for twelve days, the urine falling to 78 oz. and the sugar to 2000 gr. This patient is still under observation.

In this case there seemed to be an improvement taking place independently of the drug, and which in no way ceased when this was discontinued. The other two instances where its use was followed by a decrease were neutralised by the fact that subsequent trials in the same patients were followed by an increase. Thus, in W. S——, aged twenty-one, the first trial was followed by a decrease, the second by an increase; and in F. M——, aged thirty-one, the first and third trials were followed by an increase, the second by a decrease. The duration of the use of the drug varied from three to thirty-five days. The five trials that resulted in an increase were respectively three, five, thirty-five, twelve, and fifteen days, while the three resulting in a decrease were three, eight, and twenty-four days. As far as possible the conditions were identical, so that if the drug is to be credited in any instance with the reduction of sugar, it must also be debited with its increase in the other instances, and we must conclude that it did more harm than good to my cases. I do not, however, think so harshly of it; I believe it to be a very harmless substance, and incapable of action either for good or evil. It deserves just as little to be regarded as a specific for diabetes as does arsenite of bromine, salicylate of sodium, bromide of potassium, codeine, salicine, boracic acid, or uranium nitrate, each of which has found enthusiasts to believe in it. I discussed the claims of these drugs in a paper published in the *Practitioner* for December, 1886, to which I would refer any reader who desires to know more of my opinions as to the rational use of drugs in diabetes.

One word as to saccharine. A convenient solution for sweetening purposes may be made by using bicarbonate of soda as a solvent, in the proportion of five grains of bicarbonate of soda and ten grains of saccharine to one ounce of water; a teaspoonful is sufficient to sweeten a cup of coffee. In preparing potash imperial for diabetic patients, four grains of saccharine to the pint are sufficient to make it very distinctly sweet. Saccharine is not expensive; I understand it can be sold retail at about 1*s.* 6*d.* a drachm.

I am, Sirs, yours truly,
ROBERT SAUNDBY, M.D. Edin., F.R.C.P. Lond.
Birmingham, Oct. 10th, 1887.

"THE PRESYSTOLIC MURMUR, FALSELY SO CALLED."

To the Editors of THE LANCET.

SIRS,—I have read with considerable pleasure the attack on the auricular systolic murmur, as such, by so eminent a member of the profession as Dr. Dickinson, contained in the first part of his paper, "The Presystolic Murmur falsely so-called." He treats the subject from a physician's aspect; may I be permitted to make a few remarks from an anatomical standpoint?

In considering the causation of the murmur, a comparison is necessary between the normal and the stenosed mitral orifice, more especially with reference to the position of the valves during diastole and beginning contraction. During the diastole of the ventricle blood from the pulmonary veins is gradually filling the auricle, flowing on into the ventricle, lifting up the valves from the ventricular wall, and producing an orifice similar to, though larger than, the stenosed one. The auricular contraction commencing in the great veins forces the blood through this funnel-shaped orifice into the ventricle, the effect of which is the distension of the ventricle and the complete approximation of the valves before the commencement of the ventricular contraction, thus preventing any regurgitation. I am aware that this latter assertion is denied, and that many prefer to regard it as being brought about by the beginning ventricular contraction. In support of what I have stated I may mention the following experiment, well known to your readers:—

The heart being removed from the body, with the ascending part of the arch of the aorta and pulmonary artery, which are tied so as to occlude their orifices, the left auricle is opened, and a stream of water is made to flow through the mitral orifice; the valve segments are then seen to leave the ventricular wall, and gradually to approach each other; the stronger the stream, the more rapid and firm the approximation. Instead of water, I have often, with a like result, used air, by placing the nozzle of a syringe at the mitral orifice and forcing air into the ventricle—this under conditions similar to those existing in the body. If a force, therefore, equal to the auricular contraction can approximate the valves, why is it necessary to assume that these are only approximated by the commencing ventricular contraction?

In applying the above experiment to a heart with a stenosed mitral orifice, I have noticed that such is not closed until a greater force of water is used than is necessary to close a normal mitral orifice. And in stenosis, with a definite ventricular systolic murmur during life, the orifice cannot be accurately closed by such procedures. This being allowed, then, it follows that the auricular contraction will not approximate the thickened fibroid valve segments, or will not completely close the funnel-shaped aperture bounded by the ring of adherent valve segments present in mitral stenosis. The ventricular contraction following, regurgitation through the imperfectly closed mitral orifice results; it is this regurgitation which has been described as of direct mitral origin. Again, as Dr. Dickinson points out, may not the character of the murmur be an additional argument in favour of the ventricular systolic theory? For has it not been described "as running up to the systolic sound," and "increasing in intensity until lost in the systolic sound"? If the mitral valves at the beginning ventricular contraction are not approximated, but become so during its contraction, the orifice will therefore become narrower and, the force remaining the same or increasing, the resulting murmur will increase in intensity, and on the complete approximation of the valves will be followed by the sharp sound

which, though described as the first sound, yet differs materially from the booming character of the normal first sound.

I am, Sirs, yours very sincerely,

Crewe, October 4th, 1887. W. OWEN TRAVIS.

To the Editors of THE LANCET.

SIRS,—By a somewhat remarkable coincidence two men of unquestionable ability and originality have almost simultaneously attacked the commonly accepted belief on the manner of production of the so-called presystolic or auriculo-systolic murmur—a murmur which, curiously enough, is accepted by observers as of all cardiac murmurs the only one the mere recognition of which is absolutely diagnostic of organic valvular disease. Dr. Dickinson in your own pages, and Dr. McVail before the Medico-Chirurgical Society of Glasgow (*Brit. Med. Jour.*, Oct. 8th, 1887), have both asserted their belief that the auricular contraction is incapable of producing the presystolic murmur, which, they say, is really ventricular systolic in its rhythm and regurgitant in its nature; and Dr. McVail has gone into elaborate detail to show its method of production. Now, it seems to me that, without discussing the position further—and there is much room for discussing it,—there is one series of well-ascertained facts which is absolutely fatal to its acceptance. The presystolic murmur as we general practitioners see it—and it is exceedingly common—occurs in the majority of cases in a heart which is perfectly regular in its action and moderate in its rate of contraction, and is thus in a condition favourable to its careful study. It begins *almost immediately* after a faint and perhaps reduplicated second sound, and runs right on to the short, sharp, and loud first sound (or what represents the first sound), and thus it abruptly ends. Occasionally this is followed by an ordinary ventricular systolic murmur; but its existence is of no importance to my present purpose. Then comes the second sound again, in its usual course, and the cycle is complete. Now, if the theory which these observers advance be correct, the ventricular systole commences *immediately* after the closure of the sigmoid valves, and ends only with their closure a second time; for it is clear that, whether there be a characteristic mitral systolic murmur present or not, the completion of the ventricular contraction must be at once followed by the closure of the sigmoid valves, and the production therefore of the second sound. In the extremely brief period, then, which intervenes between the completion of the ventricular contraction and the production of the second sound, *plus* the short period during which that sound lasts, *plus* the very brief interval which elapses before the murmur begins again, we are asked to suppose that there occur, in succession, the cardiac pause, the ventricular diastole, the auricular contraction, and the complete ventricular distension; whilst, on the other hand, the ventricular contraction, which we have hitherto regarded as short and sharp in its character, is drawled out, as it were, during the long presystolic murmur, the occurrence of this first sound, and up to the fraction of a moment before the occurrence of the second sound. In other words, we are asked to believe that all the essential work of cardiac rest, collection of blood in the auricles, and the filling of the ventricles, takes up greatly less than the half of a cardiac revolution, whilst the work of emptying the ventricles into the great arteries takes up far more than the half, and that, too, in the case of a left ventricle, which in uncomplicated cases is undilated and unhypertrophied, if, indeed, it be not actually atrophied. It seems to me, therefore, infinitely more difficult to accept the position which is being now proposed to us, than to believe that the contraction of the auricle is itself the cause of the murmur. How strangely views change on these matters, for not seventy years ago Laennic believed that the auricular contraction was sufficient to explain the second sound, and was, indeed, its cause. There can be little doubt that he not only recognised the presystolic murmur, but correctly connected it with contraction of the mitral orifice, rightly thinking it auriculo-systolic in rhythm, but unfortunately basing his opinion upon the false belief that the contraction of the auricle was the cause of the second sound. But why should it be thought so impossible for the auricular contraction to produce this long rough murmur? If there is a true diastolic mitral murmur, there can be no other possible explanation for it than that the current of blood, accelerated perhaps by the suction power of the dilating ventricles, is thrown into sonorous vibration as it passes over the thickened and roughened cusps of the mitral valve. And if this be so, why should the still more accelerated current of blood forced into the ventricle through a narrowed orifice by the prolonged contraction of a dilated and hypertrophied auricle be unable to produce an audible sound? Indeed, it is not to be forgotten that a murmur, prolonged and even musical in quality, can be produced under circumstances of surprisingly little force or rapidity of current, as is evidenced by the occurrence of the *bruit de diable* in the veins at the root of the neck.

I am, Sirs, yours truly,

Paisley, October, 1887. FRANK SHEARAR, M.B. Glas.

"COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE."

To the Editors of THE LANCET.

SIRS,—Dr. Jacob has misapprehended the purport of my letter in your issue of the 8th inst., in which I did not undertake to prove anything, but merely stated that compulsory notification of infectious disease was acceptable both to the profession and laity of Reading, and worked smoothly and well. The question of its value as against disease is a different and larger one, to which the demands upon my time will not permit me to do justice, nor can I, owing to the death of our medical officer of health, under whose supervision our present system has grown up, obtain access to, or deal with, the statistics of the borough, as he, had he been alive, would have done.

1. I much regret that I am unable to give a satisfactory reply to Dr. Jacob's first question as to the influence of compulsory notification on the death-rate from zymotic disease. The reason is that until November, 1875, Reading had no complete system of drainage, and during the past ten years the number of houses connected with that system has been gradually increasing from 2003 in 1876 to 8765 in 1886. Therefore the two factors of improving house sanitation and compulsory notification have been concurrent, rendering it impossible to ascertain to what extent each is responsible for the reduction of the zymotic death-rate from 2·88 per 1000 of the population in the five years 1876 to 1880 inclusive to 1·96 in the next quinquennial period 1881 to 1885, being a reduction in five years of nearly 1 per 1000 living.

2. The notification certificate is a plain statement that, in the opinion of the practitioner, A. B. is suffering from an infectious disease, and specifying the situation of the building, the name of the occupier, and the nature of the disease. The practitioners here feel that they and the medical officer of health have no conflicting interests, and the latter uses his own discretion as to whether he visits the house, sends his inspector, or does neither. Our late medical officer was on the best terms with all the medical men, and would, if he thought it necessary to visit a house, consider the wishes of the medical attendant, and go with or without him, as the latter might prefer. He never interfered unpleasantly, his assistance was constantly requested, and his visits objected to by none. The disinfection and sanitation of the house was, in the case of intelligent and well-to-do householders, left to the direction of their own doctor, who could obtain, if he liked, the services of the officers of the sanitary authority, or have the same carried out by other competent persons. In the case of the poor, disinfection was carried out by the authorities, and both doctors and patients were glad to have it done. In *all* cases, on the receipt of the certificate, a printed notice was sent enjoining isolation for a specified time from the date of the last case in the house, giving particulars as to the disease and its sanitary treatment; direction for proper disinfection of the patient, premises, and clothing; advising medical attendance, and reciting the penalty for the various infringements of the Act of Parliament by infectious persons. It cannot be denied that all this is useful and to the point in tending to make people careful, and so limiting the extension of disease; and without compulsory notification these precautions could not be advocated, and probably would not be adopted. Errors in diagnosis of course occur, and in cases felt to be doubtful it is quite usual for the practitioner to ask the medical officer of health to see the case and give his opinion as to its nature. I have asked dispensary and club doctors, and they assure me that the Reading working classes have no objection to notification, and no dread of

the assistance, miscalled interference, rendered them by the health officers.

3. I have inquired of the two registrars as to the number of deaths certified by chemists and other unqualified persons. One with an experience of over eighteen years tells me that in all that time he has had none in adults. The other in five years has had one adult death certified by a herbalist. The only exceptions given by both are those of babies, all under one week old and certified by midwives. These are very infrequent. In every case where the death is not certified by a qualified practitioner the registrars invariably communicate with the coroner, who uses his discretion as regards an inquest. I think these facts refute this objection, at least as applied to Reading.

But why should Dr. Jacob require a mathematical demonstration of lessened death-rate through compulsory notification? Attached to zymotic disease is a certain percentage of deaths. In compulsory notification we have a machinery by which the spread of these diseases may be reduced, and therefore, potentially, a certain number of deaths prevented. If preventive medicine be equally with curative a function of the practitioner, I do not think I require stronger ground for my advocacy. Some two or three years ago the late Dr. Shea observed that notifications of diphtheria were coming in from one particular district, and on inquiry found that all the children first attacked attended the same Board school. Inspection showed that the sanitary condition of the school was defective, and the school was immediately closed until the defects were remedied and the outbreak was at an end. This is one out of many instances in which we have been indebted to compulsory notification.

The following extracts from the last report, dated January 1887, by our late medical officer of health, still further illustrate the advantages of this institution:—"No outbreak of epidemic disease has arisen during the year requiring the compulsory closure of any elementary school, but the usual precautions of recording the names of the schools attended is continued, and children from infected houses are prevented from attending Sunday and day schools, or other gatherings. The compulsory notification clause is much needed in the suburbs, where cases often arise that are not notified." "In several instances, upon my advice, the work of needlewomen, laundresses, and other persons was stopped where scarlet fever existed in their houses, compensation to a moderate extent being paid them for the time; and the power to do this was very useful, and to a great extent prevented hardship, for the relieving officer could afford no aid beyond offering 'the house' to the entire family, which would have broken up their home." "Small-pox was very prevalent in the county of Berks, and in adjacent districts last year several troublesome outbreaks occurred. The infection was brought into the borough on four occasions; but the cases being at once removed, and the ordinary precautions adopted on the premises from whence they came, there was no extension of the disease. This was the more fortunate, as the cases arose in very small houses and in two small beer-houses of a very similar class to a common lodging-house." Again, having in view the still further perfecting of his preventive measures he writes: "Scarlet fever was rather prevalent. A mild type existed, and though 236 cases were reported only eight proved fatal. A few were isolated in the cottage. Notification of cases of scarlet fever without the means for isolating them is very much reduced in value. Children from infected houses can be prevented from attending school, certain trades can be controlled, and where scarlet fever prevails the taking in of needlework and washing can be prevented, but the chief means for arresting the disease is wanting if the first cases cannot be removed to a hospital." Dr. Shea hoped that in time he might be able to establish a small hospital for infectious isolation. Lastly: "Notification of disease has proved very useful in several instances during the past year. Since notification has been in force it has worked very smoothly, and without any friction or difficulty. This, I think, greatly arises from the fact that we have in Reading a body of gentlemen practising medicine who have always shown the most perfect willingness to assist in every way in their power in the prevention of the spread of infectious disease."

Such was the opinion of a most unprejudiced and very experienced sanitarian on the value of compulsory notification. In support of my plea for its national adoption I cannot do better than allude to an address on the National Value of Public Health, delivered by Sir James Paget, and published in the journals in June, 1884. In this, he says: "I take it for granted that a large portion of all national welfare is dependent on the work which the population can constantly be doing; or, if I may so express it, that the greater part of the national wealth is the income from the work which is the outcome from the national health." Then after dealing with statistics, he continues: "Thus we may believe that our whole population between fifteen and sixty-five years old do, in each year, 20,000,000 weeks' work less than they might do if it were not for sickness." After calculating this loss to the country in millions of pounds, he remarks: "The losses of work due to sickness among children must be very large. Consider the time which might be spent in good productive work if it were not spent in taking care of them while they are ill." He then refers to losses due to the deaths of those who die young, which he estimates at much more than £2,000,000 sterling per annum. After apologising for making money appear as a motive for doing things for which sufficient motives might be found in charity and sympathy, this eloquent and distinguished advocate, in answer to the question "What more is wanted?" replies: "A larger and more practical recognition of the value and happiness of good national health; a wider study and practice of all the methods of promoting it; or, at least, a more ready and liberal help to those who are striving to promote it."

On the grounds of philanthropy and of political economy, I venture to express the hope that the opponents of compulsory notification may at length recognise that in it we possess a method capable of beneficent results to the nation at large, and in no way inimical to the interests of the medical profession.

I am, Sirs, yours faithfully,

Reading, Oct. 17th, 1887. J. HOPKINS WALTERS.

THE PURGATIVE TREATMENT OF PERITONITIS.

To the Editors of THE LANCET.

SIRS,—I am quite disposed to attribute the success in Mr. Frank Sturges' case to the purgative pills, though I wish to point out that my advocacy of this treatment was confined to the peritonitis following surgical operations—a very different thing from the peritonitis of childbed. In Mr. Sturges' case the purgatives were given before vomiting was established, and they probably therefore got a chance of being effective. To be of any use the purgative treatment must be employed early, before distension has paralysed the intestines, and before incessant vomiting has made every effort to do anything by the stomach of no avail. In fact, I look upon the purgative method rather as a preventive of, or as a method of aborting, peritonitis, than as a way of curing it. This will be quite evident to anyone reading my paper on the subject. Yet very far advanced peritonitis may be cured by this method if the vomiting can be stopped, and this is best done by putting nothing, absolutely nothing, in the stomach for twenty-four or even forty-eight hours, and giving a fairly large dose of morphia by hypodermic injection. But puerperal peritonitis has as its base in very many cases a specific poison, against which purgatives and everything else are powerless. Even opening the abdomen and cleaning it out fails to obtain the large success in puerperal cases which it certainly has, in my hands at least, in suppurative peritonitis which is non-puerperal.

I am, Sirs, yours obediently,

Birmingham, Oct. 15th, 1887. LAWSON TAIT.

PROTECTION BY COMPLETE VACCINATION.

To the Editors of THE LANCET.

SIRS,—It may interest the public to know how completely two children were protected from small-pox by having been fully vaccinated.

I was called to a club patient suffering from small-pox, having taken the disease from his wife. Seeing that the wife, then just convalescent, was nursing a baby five months old who was perfectly well, and who had had but a pimple on its nose, which never proceeded to suppuration, I inquired if the child had been vaccinated, and examined the arms, which bore five large cicatrices each. Observing that I took notes of the case, the mother told me that a friend of her's, who took the disease after visiting her (living in the next house), also had a baby which she was

nursing, and which had entirely escaped the infection of small-pox. I visited this case, and found that the children had been vaccinated together a month previously at a public institution, by five scarifications in each arm. This child had perfect immunity from the disease; they were both of the same age.

Speaking of the result of vaccination in a family after the small-pox had been introduced into the home, on Sept. 24th, 1875, I was called to a private patient, an elderly gentleman, who had taken the small-pox when travelling in the country. After ordering complete isolation to an upper room in the house on the 26th, I vaccinated the wife, one of the daughters, and the servant; the other two daughters and a son had been vaccinated in the previous February. The wife, unassisted, nursed her husband (by desire). The vaccination in each case succeeded, and no member of the family took the disease.

The former case was fully developed, though not severe. The latter was a severe form of the disease. The wife was the husband's junior by, I should say, at least, twenty-five years.

I am, Sirs, yours truly,

Camden-road, N.W., Oct. 15th, 1887. EDWARD BATT, M.D.

THE SIXTH INTERNATIONAL CONGRESS OF HYGIENE.

(From our Special Correspondent.)

(Continued from page 735.)

Vienna, Oct. 11th.

As the resolutions adopted by the International Congress have not yet been published, it is impossible to form a clear and complete idea of what has been voted. There is, however, in a scattered form, ample evidence of the great amount of work and research that has been undertaken. For a thorough investigation of the opinions expressed and the votes accepted it will be advisable to wait until the publication by the committee of the full report of the Congress.

In respect to the work of the Sections, one of the most original papers read was that of M. Emile Trélat, on the Means of bringing the Heat of the Sun and Proper Light to Dwellings. This is a subject of such vast importance that it must be reserved for a special study. Meanwhile, it may be mentioned that M. Trélat insisted that every wall which did not receive the direct rays of the sun would rot and harbour the germs of disease. To secure this purifying action of the sun during winter, it was necessary that streets running from north to south should be twice as wide as the houses were high. For giving light within the rooms he conclusively proved that windows required to be heightened rather than widened. This led to a lengthy discussion, during the course of which Dr. Knauff of Berlin spoke of the caloric power a centimetre of space receives, and concluded by urging that Venetian blinds should be made to open in vertical instead of horizontal lines. Professor Baumeister urged that the direction of streets was of no importance, for what the house lost on one side it gained on the other. He further attacked the laws of Berlin for making no difference between the rules regulating the building of houses in the centre and in the suburbs of the town. Evidently it was possible to enforce in the suburbs much more severe regulations. Professor Cöhn of Berlin thought a debt of gratitude was due to France for having first introduced measures for the construction of windows in school rooms on scientific principles calculated to save the eyesight of the pupils. It was then proposed to thank M. Trélat for his report, and to proceed to the next subject. Baron de Suzor protested. He demanded that the Congress should establish principles, and should proclaim what was necessary in the first instance. It would be time enough to discuss whether these principles were practical or not when they had been firmly established. In St. Petersburg, which he had the honour of representing, all the new streets were fifteen metres wide, and it was not allowed to build a house higher than fifteen metres. The openings at the back of the houses were also fairly large, and there were rules to ensure sufficient light to the inhabited rooms. M. Trélat replied that rules for the construction of streets likewise existed in France, but they did not suffice to meet the case. The Russian regulations represented but a trivial progress, for the houses were one and a half times as high as the back yards were wide. With respect to the compliments Professor Cöhn had made to the French nation, they were really due to Professor Cöhn himself, for it was his work on Shortsightedness, written some fifteen years ago, which had induced the French Government to protect the eyesight of the children in schools. Baron de Suzor again rose to explain that he only gave details about the rules enforced at St. Petersburg in the hope that the Congress would pronounce a definite opinion that something better was required. In spite of this, the Section came to no decision. Some proposed to adopt M. Trélat's conclusions, others to merely thank him for his paper. In the confusion that resulted it was impossible to say whether either of these two proposals was adopted. No clear and decisive vote seems to have been taken. This was all the more unfortunate as M. de Suzor had evidently a definite object in view. Armed with a resolution from the Congress, he might have brought pressure to bear upon the authorities of St. Petersburg. It is to be regretted that the ability and special knowledge displayed in this discussion should not have brought about a definite conclusion.

The question of Teaching Hygiene in all Educational Establishments was very generally discussed, and the principle adopted. Many members of the Congress, however, did not seem to realise that the great difficulty, especially on the Continent, is to find competent teachers. Many speakers seemed to think that when they proposed to confine this task of teaching to medical men the whole difficulty was solved. But a great number, if not the majority, of medical men, on the Continent at least, have no knowledge of practical hygiene. As an English delegate inquired during the course of the debate, Was the Congress quite sure that even the doctors present knew how to test a soil pipe for leakage, how to direct the construction of drains, and detect the escape of sewer gas?

The debate in the Second Section on Factory Legislation was long and laboured. It was regrettable that Mr. F. H. Whymper, superintending inspector of factories, whose sketch of the working of the law in England formed, with a paper by Dr. Fridolin Schuler, of the Canton Glarus, Switzerland, the basis of discussion, was not present to take part in the votes on the resolutions. It was generally accepted that the local circumstances relating to factories differed so widely that no one general rule could be laid down relating to the amount of air, heat, and light required. In these cases special technical knowledge is necessary, and the method of factory inspection should be such as to admit in consultation those who possess the necessary practical experience. When serious dangers can only be prevented by the total suppression of certain industries—such as, for instance, the use of arsenic or phosphorus,—then such suppression should be the result of an international treaty, and should affect several nations simultaneously. A very excited discussion arose as to the Half-time System. It was generally felt that if the children were allowed to go to work before they had completed their education, this practice would become a means of making them work too early in life. On the other hand, it was objected that the half-time system had given the best results, and that many children would complete their education before the law allowed them to work; this would enable them to waste a year or two in lounging about the streets, to the great detriment of their health and morals. The conflict of opinion rendered it impossible to establish any definite rule on this question. The principle of State legislation for the limiting of the hours of labour, not only for women and children, but for men also, was approved on all sides, and a resolution in favour of an International Eight Hours Bill was almost carried. A ten hours' day was carried by a large majority, coupled with the desire that this should be regulated by an international treaty. The Saturday half-holiday was also approved. Then there was a resolution adopted to the effect that where, as in the piercing of tunnels &c., the employers had to provide food for the workmen, such food should be occasionally examined by independent inspectors. During the course of the discussion it was pointed out that three classes of inspectors were required: doctors for all matters relating to medicine and prophylaxis; specialists, whether doctors, architects, engineers, or others, for difficulties relating to drainage and ventilation of workshops and factories; finally, with respect to the various methods by which unscrupulous employers elude the law, to the detriment of the health of their

workmen, inspectors should be selected from among the victims themselves. A resolution to this effect was put late in the day, and when the room was nearly empty. It was defeated by 21 against 13; but in the majority there were no less than five manufacturers and several Austrian inspectors of factories. In Austria these inspectors are selected from among the commercial classes. The chairman himself was a factory inspector, and had been formerly employed by a chamber of commerce. Under these circumstances, while the working-class interests were not directly represented, members of the commercial and manufacturing classes, who are keenly interested in checking factory legislation, were present in large numbers, and took a very active part in the debates. This is scarcely fair. The object of the Congress should be to obtain the disinterested opinion of men of science engaged on sanitary reform, instead of having to listen for hours to manufacturers who are doing their utmost to prevent such legislative interference as will, while improving the health of the population, tend possibly to limit the present almost inexhaustible supply of cheap labour. In such matters it is difficult to prevent a collision between economical and sanitary problems; but, in any case, the points at issue should be debated purely on sanitary grounds, and the vote should not be influenced by persons who have their own financial interests at stake. In spite of this alien influence present in the Section, some very strong resolutions were carried by the doctors who assisted. One resolution, for instance, was proposed in favour of assimilating railway servants and private servants to ordinary workmen, with regard to such legislation as affected factories, the hours of labour, &c. This, at the first vote, resulted in a tie of 15 against 15; and at a second trial was carried by 15 to 9. The small number of voters in this Section shows how many members abandoned their work in consequence of the great difficulty of understanding what was going forward, as was mentioned in a previous letter.

In the same Section, Professor Erismann, of St. Petersburg, related how he had examined 100,000 workmen, and found that, on an average, those engaged in textile industries were not as tall as the other classes of workers. Their chest measurement and bodily weight were also inferior. These symptoms of degeneration of the textile workers were more particularly distinct among the spinners. In every respect also they took a longer time to grow. Finally, the lifting power of the hand was not so great as that of workers in other trades.

A Fourth Section was created for the hearing of papers without discussion, and here Professor Reis lectured on Colour-blindness among Railway Servants. He dwelt at length on the mode of examining the sight, and said that in all countries committees of physicians should meet to determine what methods were best, and to see, from time to time, whether these could not be revised. Professor Tessier of Lyons followed with a paper on Diphtheria, in which he expressed a belief that the virus was contained in dust, and that there was an intimate connexion between diphtheria in poultry and among human beings. In the same Section an essay by Dr. G. Treille, professor at French naval schools, on the Acclimatising of Europeans in Tropical Countries, was so warmly approved that the Section decided to reprint and distribute the paper at the cost of the Congress.

The discussion on the Trade in Rags, commenced at the Hague Congress, was resumed in the Third Section. Professor Corfield had prepared a report on this subject. He stated that the questions he had addressed to various interested parties resulted in very unsatisfactory replies. The trade would be thoroughly opposed to the projected packing of rags in a covering soaked in a corrosive sublimate solution. Dr. E. Vallin of Paris and Dr. Finkelnburg of Bonn spoke next. The latter drew a line between dirty linen and rags. He gave details of different cases of epidemics traced to importation of rags, and thought that they more frequently caused outbreaks of small-pox. The proposal to disinfect all rags by heat would cause too great an expense. Dr. Henri Martin of Paris then read a masterly description of the scientific experiments made in the disinfection of rags. The difficulty had always been to reach the centre of a bale. He remarked that by dividing the bales it was possible to satisfactorily disinfect them at a cost of about £2 for a hundred bales or twenty tons. A long discussion ensued, in which it was suggested that no particular form of disinfection should be approved, as new inventions modified these methods from day to day.

The Third Section, in which the questions relating to Cholera had been discussed, was so overwhelmed with work that it had to form a sub-section, and here M. Chamberlain, as the representative of M. Pasteur, spoke on the results obtained by Preventive Inoculations against Anthrax. He produced numerous statistical tables. Two German physicians, Drs. Gaffky and Loeffler, formerly Dr. Koch's assistants, challenged these statements; but Dr. Lydtin of Karlsruhe said that good results had been obtained in South Germany by inoculations for the prevention of anthrax. With respect to swine plague, the upshot of the experiments made was not so satisfactory, and scarcely justified the confident recommendation of the process of inoculation. A very animated discussion ensued, and most of the speakers expressed their conviction that the scientific value of the Pasteurian methods could not be doubted, but that for practical application further experiments were necessary.

On the Saturday the Sections were to have terminated their work in the forenoon, but the Third Section met again in the afternoon, and a large crowd of members were present to hear M. Chamberlain on the Prevention of Rabies. He apologised for M. Pasteur's unavoidable absence, due to his indifferent health, and then delivered a most interesting lecture, which, unfortunately, the limits of space render it impossible to reproduce. He remarked that when M. Pasteur commenced his studies nothing was known of rabies. The virus was generally supposed to be in the saliva, but it was ultimately found that certain results could only be obtained by going to the nervous centres. Even then, when the nervous substance was merely injected under the skin, several weeks passed before rabies entered. Then M. Pasteur had the idea of introducing into the brain, by trepanning, the marrow of an animal killed by hydrophobia. By this means the results obtained were absolutely reliable. Illness commenced in fifteen days, and death took place on the twentieth day. Several hundred experiments have proved this. There is never a variation of more than one or two days. In the presence of this double result, the possession of a true virus and a trustworthy effect, it seemed as if a basis of action had been found. M. Pasteur had all along conceived the hope of making a vaccine. Unfortunately, for rabies the same process could not be employed. M. Chamberlain then explained the various phases of research which led to the discovery of a method which could be relied on for attenuating this virus; how a young Alsatian volunteered to submit himself to inoculation, and how, with the success of this experiment, hundreds had come to be treated in a similar manner. It was impossible to say how many lives had been saved. There were no data on which to establish such a calculation. Some authors had maintained that the proportion of deaths from bites of mad dogs amounted to 36 per cent. The very least to be found in books on the subject was 16 per cent., and no one had ever pretended that the mortality was less than 5 per cent.; yet after vaccination the death-rate among M. Pasteur's patients had only amounted to 1·3 per cent. It could not be said how great the reduction in mortality had been, but it was impossible to deny that it was very considerable.

In the discussion that followed, one or two speakers related how they had failed in various experiments to bring about the expected and desired results. Others, on the contrary, expressed their entire satisfaction, and gave figures showing the number of persons who had been successfully treated. Dr. Metschnikoff of Odessa, notably, recognised the great work achieved by M. Pasteur, and proposed the compulsory vaccination of all dogs. M. Chamberlain had no difficulty in replying. He congratulated himself on finding that all parties approved of the principle of inoculation. The proposition to vaccinate all dogs was a proof that the principle was accepted. Some had spoken of negative results. The vaccine might easily be spoilt and other microbes gain admission. Material errors would, of course, produce negative results, and a certain amount of practical experience was necessary. In Paris there had been no failure whatsoever, and abroad many successes. M. Chamberlain explained where and how many errors in experiments had been made which falsified the result; and then concluded, amid the loud applause of a crowded room.

This brought the business of the Congress to a close; but on the following Sunday morning a formal meeting was held in the great hall of the University, when two papers were read: one by Dr. Conradi of Pavia, on the Connexion between Longevity, Anthropology, and Hygiene; the other by Dr. C. T. d'Inama-Sternagg, Royal and Imperial Councillor,

President of the Austrian Statistical Commission, on the most Remarkable Modifications which the European Populations have undergone during the last thousand years. When the papers had been read, the Congress decided to meet again in London in 1891, and elected a committee, as already mentioned, to organise the next Congress. A few short speeches then ensued. Dr. Mosso recalled the Congresses on the plains of Olympia, when Greece had reached the zenith of its civilisation. It was no longer the little States of Greece that met, but all Europe. The Congress would constitute a page in the history, not of tyrants and men of selfish ambition, but of humanity. In the name of Italy he offered his best thanks to the organisers of the Congress. M. Emile Trélat, in the name of France, spoke in the same strain. Hygiene progressed rapidly; the number of members of this Congress, amounting to 2500, proved the growing popularity of the new science. This result was due to good organisation and to the facilities which the vast building of the University afforded; but the amiability of the Viennese people had, more than all, facilitated the great work. "This soft amenity, which is true strength, had made the success of the Congress."

The name of the General Secretary, Professor von Grüber, was often associated with these speeches of congratulation, and certainly it is impossible to speak too highly of the devotion, the unfailing zeal, and the energy of the General Secretary. Thus the Congress came to an end. It was nearly two in the afternoon when the final cheers were given, and the members hurried away to prepare for the excursion to Buda-Pesth, and the farewell banquet given on the same evening.

In this comparatively brief account of the debates there are many important omissions. Numerous speeches and papers were read and delivered quite as interesting as those to which some allusion has been made. To their authors sincere apology is due, but the laws of measurement and of space are inexorable, and some sacrifices had to be made. It would not, however, be right to leave undescribed the marvellous reception, which lasted three whole days, accorded to the six hundred members of the Congress who went to Buda-Pesth. This most impressive and last phase of the Sixth International Congress will be the subject of a subsequent letter. In the meanwhile, it only remains to add that, under the gallery of the vast courtyard of the University, there was during the Congress a small sanitary exhibition. Here might be seen specimens of school furniture, of warming apparatus, a great collection of statistical charts, and the familiar exhibits of the English Ladies' Sanitary Association and the English Society for the Prevention of Blindness, with Dr. Roth in person to explain to all continental hygienists how the knowledge of sanitary questions was popularised in England. There were also ambulances, cooking stoves, portable hospitals, and many other kindred subjects. In every sense, therefore, the Sixth International Congress must have greatly contributed to spread the knowledge of sanitary questions in Austria and throughout Europe.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE.

AT the Exhibition Theatre here on Saturday evening last, Dr. Mears gave a lecture on "First Aid in Cases of Accident." The lecture was ably delivered and well illustrated. Mr. Waynman Dixon of Sunderland, who presided, pointed out that, although a clause in the new Mines Act renders it compulsory for coal mines to keep on the premises the appliances necessary for giving first help to the injured, yet it is obvious that unless there be at the collieries persons who understand the use of such surgical accessories the provision made by the Act is absolutely valueless. Our ingenious *confrère*, Dr. Wm. Murray, has also been lecturing here on "The Evil Effects of Regular Habits," contending with much point and force that persons suffer in health from the monotony of over-regularity, and that a change is often indicated in the lives of these very regular people when they fall into bad health. Dr. Murray's lecture has given rise to a very brisk newspaper correspondence, but the lecturer's views seem to hold the field. There has been a considerable increase in fever cases in Newcastle; the last fortnight 126 cases have been notified, of which 93 were scarlet fever and 20 enteric. The Tyne Port Sanitary Authority during the last two months had inspected 1192 British steamers, 401 sailing vessels, 242 foreign steamers, and 197 sailing vessels, making a total of 2032. In all, 35 cases of sickness were found on board, and were inquired into and provided for; but two infectious cases were found, which were removed in the launch to the hospital. Only one vessel arrived which had been infected with cholera, and she was fumigated before entering the Tyne. The medical students who were under censure since the opening of the College have tendered an apology to the authorities, which has been accepted, so that they are allowed to pursue their studies this session. I am glad to hear that Dr. Luke Armstrong, whose late illness has been much exaggerated, is likely to very soon resume his professional work.

JARROW.

An unfortunate termination has taken place to a wedding feast at Jarrow, several people—about sixteen in all—having suffered from poisoning after partaking of a cake. So far there has been no death, but dangerous illness has resulted in many cases. The maker of the cake states that the only ingredients she used to "ice" the cake were half a pound of fine white sugar and the white of two eggs. She states that when she made the ice a fortnight ago she ate what was scraped off the edge of the dish, and also a little that dropped off the cake, when she was seized with similar illness to the Jarrow patients. The cake has been sent to the county analyst.

CARLISLE.

The inhabitants of the village of Burnriggs, about six miles east of Carlisle, are suffering terribly from typhoid fever. Thirty-seven cases of the disease have occurred, and four of them have already proved fatal. The sanitary authorities have traced the origin of the disease to a polluted well, which has now been closed. The village consists of about forty cottages, inhabited by between 120 and 130 persons, who for the most part gain a livelihood by working at the paper and woollen works in the neighbourhood. The local papers say that about one-third of the population has been stricken with fever.

Newcastle-on-Tyne, October 18th.

EDINBURGH.

(From our own Correspondent.)

OPENING OF THE WINTER SESSION.

ON Tuesday, the 18th inst., the winter session at the University was inaugurated by an address to the students by Principal Sir William Muir, K.C.S.I. On behalf of the Senatus Academicus, which was largely represented on the platform, the Principal extended a welcome to the new comers on their entry into university life; while to the seniors he addressed an earnest appeal to make full use of the passing period of their student life that they might be well equipped for the work that lay before them in the active world in which they must play their part. Sir William then proceeded to review the developments which have occurred in the Scottish University system, and particularly in the University of Edinburgh, during the last fifty years. The growth which has occurred has not been a mere increase of size and numerical strength, but has been fraught with a gradual unfolding of the system of education, which has expanded widely as a whole, and has attained a much higher complexity in each of its parts. In surveying and depicting the main features of the student life of Scottish Universities, the speaker took occasion to compare it with other great centres of learning, and particularly with some of the newly-founded colonial universities. The main distinctive feature was the greater amount of personal independence that obtains here. This within duly guarded limits was a great advantage on the whole; but it had its drawbacks, among which was the fact that it did not imbue undergraduates with that feeling of corporate existence which tended to foster public spirit among them. Several attempts, and so far successful attempts, are now being made in Edinburgh to obviate this want; and these efforts had the Principal's warm sympathy and personal encouragement; in them probably lay the germ of a larger

system of colleges and halls of residence affiliated to, and under the control of, the University. Although large sums of money were frequently devoted by generous donors to kindred educational purposes, and fine public schools and colleges, such as Fettes' College, were established, it was unfortunate that no endowments had as yet been forthcoming for supplying students with so obvious a requirement as suitable residential establishments under efficient superintendence. When such funds were available he thought we might look for further improvements in our university system.

Edinburgh, Oct. 18th.

DUBLIN.

(From our own Correspondent.)

THE CONJOINT SCHEMES OF THE COLLEGE OF SURGEONS.

THERE will very soon be two Conjoint Schemes in connexion with the Royal College of Surgeons, one with the College of Physicians, and the second with the Apothecaries' Hall. On analysing the regulations of these two schemes, there appears but little material difference as regards the lectures &c. to be attended and the fees to be paid—viz., an additional course of lectures in anatomy, and of seven guineas in the examination fees. The Apothecaries' Conjoint Scheme, however, as it is less expensive, will no doubt prove a formidable opponent to the scheme of the College of Physicians; and, indeed, I should not be surprised, from what I hear, to find very soon that that corporation will withdraw altogether from any combination with the College of Surgeons. The exact date for the first examination under the Apothecaries' Conjoint Scheme has not yet been announced; probably it will be some time in November. Last week candidates were examined for the First Professional Examination of the Colleges of Physicians and Surgeons' Conjoint Scheme. Nearly one-half of the candidates were stopped on the papers, and two-thirds of the rejected failed in Physics alone, or combined with other subjects.

SANITARY CONDITION OF CORK.

Dr. Donovan, medical superintendent officer of health for Cork, in a recent report, states that the number of deaths from diarrhœa for the month and the previous month is unusually high, and the number of cases of typhoid fever is on the increase. This clearly indicates a weak spot in the sanitary condition of the city, which he believes is the general absence of cleanliness. No effort, it appears, has yet been made to carry out some of the suggestions made last year; among others the ventilation of the main sewers for which a sum of £700 was voted. He regrets also to state that the question of the domestic scavenging of the city did not meet with the consideration it observed, and he is of opinion that the city will never be kept clean until its scavenging is taken up by the Corporation, and until Cork is kept clean diseases such as diarrhœa and typhoid fever will prevail.

ALLEGED CURE FOR HYDROPHOBIA.

The treatment adopted by Mr. McGovern, of Legnagrow, co. Cavan, has impressed a large number of observers, and in consequence it is intended to form a committee to examine and report upon the subject.

At a meeting of the Fellows of the College of Physicians this week, Drs. Gordon, Grimshaw, and J. W. Moore were elected representatives of the College on the Committee of Management under the Conjoint Examination Scheme.

Dr. Aquilla Smith has again been re-elected representative of the College of Physicians on the General Medical Council.

Dublin, Oct. 18th.

BELFAST.

(From our own Correspondent.)

THE CONSUMPTION HOSPITAL.

ABOUT two years ago Mr. Forster Green, a wealthy member of the Society of Friends in Belfast, offered to build a special wing for consumptives at the Throne Convalescent Hospital, on condition that the public would raise within one year a sum of £15,000 as an endowment, so that the new building, which would accommodate thirty patients, might not be a burden on the supporters of the hospital. Mr. Green most generously offered to extend the time for the raising of the endowment until the end of this year, and he also promised to contribute himself £1500. The total sum already subscribed or offered is a little over £7000, and a special meeting of the committee and life governors of the Royal Hospital was held last week to see what means could be devised to raise the additional sum. At this meeting it was finally decided to ask Mr. Blackiston-Houston, the Vice-Lieutenant of county Down, to give the Board of Management his assistance. I understand this gentleman attended the weekly meeting of the committee on Saturday, but regretted he was unable to give any help in the matter. To many it would seem, considering the present depressed condition of trade and the great depreciation in the value of landed property in Ireland, that it is well nigh impossible to raise such a large sum as £8000, but I trust that many of the wealthy citizens of Belfast will subscribe, so that Mr. Green's offer will be fulfilled, and a means afforded of relieving some of those afflicted with a disease which is extremely prevalent in Belfast.

HANS FLEMING, M.D.

Dr. Hans Fleming died at his residence in Omagh, co. Tyrone, on Friday, October 7th, in his seventy-fourth year. Dr. Fleming was the second son of John Fleming, Esq., of Ashfield, co. Meath, where his ancestors, who came from Holland, originally settled. Dr. Fleming, who was a Licentiate of the Irish College of Surgeons and an M.D. of St. Andrews, practised first in Balieborough, co. Cavan, and afterwards at Carrickmacross, co. Monaghan; and in both places he was much respected and had considerable success. He was appointed medical officer of the workhouse in Omagh in January, 1857, and held the office until 1885, when he resigned, and was succeeded by his son, Dr. Hans B. Fleming, who is now in active practice in Omagh. During the long period of his life spent in Omagh Dr. Fleming was universally respected. He was most attentive alike to poor and rich, and the immense concourse of the townspeople of Omagh and of the gentry of the surrounding districts at his funeral was a high tribute to Dr. Fleming's great worth.

Belfast, Oct. 19th.

PARIS.

(From our Paris Correspondent.)

ESSENCE OF TANACETUM VULGARIS.

IN the month of March, 1872, M. Peyraud, in his biological researches on the series of essences having isomeric relations, discovered an essence till then undescribed, which resembled in odour that of absinthe (wormwood). It was extracted from a synanthereus, the "Tanacetum vulgaris," which is still known under the names of "worm-herb," "horse-wormwood." This essence had till then been but little studied chemically and biologically. M. Peyraud remarked in his note to the Academy of Sciences at a recent meeting that, after injecting two drops of this essence in the veins of a rabbit, the animal was seized in about twenty seconds with terrible convulsions. It sprang forwards or backwards by bounds, and even upwards, generally falling on its left side. The teeth chattered, the animal bit its tongue, and there was an abundant flow of saliva from its mouth. The sense of hearing was greatly exaggerated. Moreover, when one held a stick near to the mouth of the rabbit, it bit it with such force that the animal could be raised without its letting go the stick. The convulsions lasted, on an average, from fifty to sixty minutes. The limit of the toxic dose scarcely exceeds three or four drops. To the convulsive period succeeded a comatose period of from two to three hours, during which the animal seemed insensible to any species of excitation. Finally the normal state returned, and the next day the animal did not appear to have been at all affected by the violent attack of the day before. After having remarked that the toxic effects of the essence of tanaisia approached very little the epileptic type which is observed with that produced by the essence of wormwood. M. Peyraud assimilates them with the rabic type in the following terms: "All the phenomena of rabies are here

found—hallucinations, convulsions without loss of consciousness, opisthotonos, spasms of the muscles of the pharynx, of the larynx, and of the thorax, abundant salivation, asphyxic phenomena, sensorial excitability, tendency to bite, characteristic hoarse voice, diminution of the power of motion, momentary paralysis, sanguinolent froth from the trachea and the bronchi, subpleural hæmorrhage, sanguineous infarcts of the liver. We believe, then, that we are absolutely in the truth in giving to the tanacetic effects the name of *rage tanacétique, rage artificielle, simili-rage.*"

A PRECURSOR OF PASTEUR.

It would appear from the following note from the "Intermédiaire des Chercheurs et Curieux," cited from vol. i. of the "Traité des Erreurs et des Préjugés" of J. B. Salgues, Paris, 1810-11, that M. Pasteur has had a precursor in his theory of the cure of rabies by the inoculation of an attenuated virus of the same species: "The carnivorous animals, which are susceptible of contracting rabies, are also the only animals capable of communicating it. The innocent species, which live on fruit, herbs, and grain, might be able to receive but do not transmit it, as if nature wished by this happy exception to recompense them for their pacific virtues. This fact is now known to be constant, so that it would perhaps be possible to find in these animals a virus more mild, and to transmit it to the carnivorous species as they transmit the vaccine virus to the species susceptible of small-pox." Thus it may be seen that the above is enunciated as a simple hypothesis; but the idea is not the less singular.

THE ETIOLOGY OF TETANUS.

The etiology of tetanus divides pathologists into two camps. Those on one side admit that, if this malady frequently succeeds a wound, it may also originate without previous solution of continuity and under the influence of divers causes, the principal being cold; hence two forms—traumatic or surgical tetanus, and spontaneous or idiopathic or medical. For the others, the malady is always traumatic; whence two doctrines—that of *dualists*, and that of *unicists*. Professor Verneuil, who read a paper on this subject at the Academy of Sciences last week, entirely rejects the opinion of the dualists, and classes tetanus with microbian maladies, virulent or infectious. The pathological problem, he stated, then reduces itself to discover how and when the penetration of the virus is effected, and what circumstances favour or hinder it. "If, as the ancient unicists thought, penetration is always effected through a traumatic opening, the pathogeny, as simple as the etiology, would allow of only one process—breaking (*effraction*); but as the infection might take place when the solution of continuity of pathological origin, inflammatory or even traumatic, is covered over with a granular membrane, continued and protective, one may believe that the virus had penetrated without violence by a second mechanism, which would admit of a second form—tetanus by absorption. But as certain subjects appear to have no solution of continuity, recent or ancient, internal or external, but have been seized with tetanus by exposure to cold—by lying out, for instance, on a cold field,—nothing could prevent the idea that they had absorbed by the respiratory mucous membrane, or by the skin, supposed to be intact, the tetanic virus of which the soil is at times certainly impregnated; whence a second variety of penetration by absorption without any traumatic or pathological preparation, as occurs with malaria, and, without doubt, with scarlet fever, whooping-cough, &c." The dualism, therefore, the conception of which is combated by M. Verneuil, may be revived, but under another form, and in changing the terms of the problem, that is to say, one will not be able to tell whether the tetanus is medical, idiopathic, essential, traumatic, spontaneous, rheumatic, &c., which, however, is of no practical importance; but one would search with care where and by what process the virus had penetrated, and, if it be desired that their dichotomic division should be preserved, one may admit a tetanus by *effraction* and a tetanus by absorption. In any case, there will be no spontaneous tetanus, as a poison, always identical, playing the part of constant and necessary cause, will always be found.

Paris, Oct. 18th.

THE Duchess of Cumberland on the 15th inst. left the private asylum in which she had been confined since last March. Her Royal Highness is said to be perfectly cured.

THE SERVICES.

THE following arrangements have been made, subject to such modifications as may be deemed necessary, for the embarkation to England of the executive officers whose term of service in India will terminate during the trooping season of 1887-8.—By first troopship, Oct. 15th: Surgs.-Major W. T. Martin and G. Andrew, and Surg. R. R. Elmes. Second troopship, Oct. 29th: Surg.-Major T. M. O'Brien and Surg. E. J. E. Risk. Third troopship, Nov. 12th: Surg.-Major A. H. Ratigan and Surgs. J. W. Beatty and J. R. Yourdi. Fourth troopship, Nov. 25th: Brig.-Surg. R. P. Ferguson and Surg. G. H. Younge. Fifth troopship, Dec. 31st: Surgs.-Major Barker and J. Martin, and Surg. W. A. Morris. Sixth troopship, Jan. 14th: Surgs.-Major W. H. Clemo and O. F. Molloy, and Surg. G. T. Goggin. Seventh troopship, Jan. 29th: Surg.-Major J. P. H. Boileau and Surgs. W. Babtie and R. F. O'Brien. Eighth troopship, Feb. 18th: Surg.-Major J. Wilson and Surgs. J. McLaughlin and R. Fowler. Ninth troopship, March 17th: Surgs.-Major F. Dick and J. C. Dorman, and Surg. H. J. Peard. Tenth troopship, March 31st: Surg.-Major M. D. O'Connel and Surgs. F. P. Nichols and G. U. Brazier-Creagh.

ARMY MEDICAL SERVICE.—We are requested to state that no examination for commissions in the Medical Staff of the Army will be held in February, 1888. We presume this suspension of admissions into the Service is a result of the reduction of the staff consequent on the withdrawal of troops from Egypt.

Dr. Galbraith has been appointed Principal Medical Officer on the Staff at Suakim.

WAR OFFICE.—Army Medical Staff: Surgeon-Major Francis Patrick Staples to be Brigade Surgeon, vice St. John Killery, deceased (dated Sept. 20th, 1887). The undermentioned Surgeons to be Surgeons-Major (dated Sept. 30th, 1887):—John Findlay, M.B., Patrick Aloysius Hayes, William Mawer James.

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon G. Bolster, to the *Excellent;* Surgeon J. Bagnall-Oakley, to the *Lizard;* Surgeon H. B. Beatty, to the *Bramble;* Surgeon A. Kidd, to the *Ready;* Surgeon J. Cashin, to the *Mistletoe;* Surgeon H. J. M'Todd, to the *Impregnable;* Surgeon W. C. Speller, to the *Ganges*, temporary; Surgeon W. R. N. Young, to the *Lily;* and Surgeon Horace K. Browne, to the *Royal Adelaide* (to date 18th inst.).

RIFLE VOLUNTEERS.—1st Volunteer Battalion, the Sherwood Foresters (Derbyshire Regiment): Surgeon C. A. Greaves, M.D., is granted the honorary rank of Surgeon-Major (dated Oct. 15th, 1887).—5th Lanarkshire (Glasgow, 2nd Northern): Acting Surgeon E. Kingscote, M.B., resigns his appointment (dated Oct. 15th, 1887).

Medical News.

ROYAL UNIVERSITY OF IRELAND.—The following have obtained the degree of Master in Surgery:

Robert Bryans, David C. Campbell, Robert J. Duffin, William M. Elliott, John Ellison, Robert J. Ferguson, Walter M. Hamilton, Gerald Hickey, William M. Killen, Hugh A. Logan, William M. Lewis, Richard C. Mc Cullagh, John Mc Elwee, Henry L. Mc Kisack, Samuel Mathews, Robert Nelson, D. J. O'Mahony, William J. O'Meara, Francis L. Sealy, John H. Sharpe, Cecil E. Shaw, John J. Shaw, Joseph Stewart, Henry J. Taylor, James Tomb.

The undernamed have passed the examination for the degree of Bachelor of Medicine:—

UPPER PASS DIVISION.—John Campbell, Robert Duffin, *W. M. Elliott, Gerald Hickey, *John J. Lynch, Richard McCullagh, *Henry MacKisack, *Robert Nelson, W. O'Meara, *Joseph Stewart.

* Eligible for the further examination for honours.

PASSED.—J. F. Annesley, Robert Bryans, James Clifford, E. R. Crofton, Francis E. Gahagan, G. E. Gordon, Walter M. Hamilton, W. M. Killen, J. McElwee, Peter McKenna, Samuel Mathews, Cecil E. Shaw, James Tomb.

The examiners have recommended that the following be adjudged to have passed the third examination in Medicine:—

James Gannon, Thomas Gorman, William Kirk, David McGee, Allan E. Mahood, Martin Molony.

COLLEGE OF PHYSICIANS IN IRELAND.—On St. Luke's Day (October 18th) the following office-bearers were elected for the ensuing year:—President: James Little. Vice-President: A. Foot. Censors: Drs. Foot, Nixon,

McSwiney, and Smyly. Additional Examiners: Drs. G. F. Duffey, J. B. Quinlan, and V. Macan. Examiners in Midwifery: Drs. Horne and Kirkpatrick. Additional Examiners under the Conjoint Examination Scheme:—Chemistry and Physics: Drs. Ashe and W. G. Smith. Materia Medica and Pharmacy: Drs. G. F. Duffey and J. B. Quinlan. Physiology: Dr. Purser. Medicine: Drs. Finny, Foot, Nixon, and Benson. Midwifery: Dr. W. J. Smyly. Hygiene and Forensic Medicine: Drs. McSwiney and Redmond.—Examiners for the Membership:—Practice of Medicine: Drs. McSwiney and Quinlan. Pathology: Drs. Purser and G. F. Duffey. Clinical Medicine: Drs. Nixon and Foot. Examiners for the Diploma in State Medicine:—Chemistry: Dr. W. G. Smith. Climatology, Meteorology, and Geographical Distributionary Disease: Dr. J. W. Moore. Vital Statistics: Dr. McSwiney. Hygiene: Dr. Nixon. Medical Jurisprudence and Pathological Anatomy in Relation thereto: Dr. G. F. Duffey. Professor of Medical Jurisprudence: Dr. Robert Travers.—Representative on the General Medical Council: Dr. A. Smith. Registrar: Dr. J. W. Moore. Treasurer: Dr. A. Smith.

IT is rumoured that typhoid fever has again made its appearance in the Royal Barracks at Dublin.

THE Town Council of Darwen have decided to erect a cottage hospital for that district.

IT is proposed to erect a hospital in the mining division of Redruth.

THE third anniversary of the inauguration of Hospital Sunday at Barnstaple was celebrated on the 16th inst.

On the 17th inst. the first stone of the Jubilee wing of the Northampton Infirmary was laid by Prince Albert Victor.

THE thirteenth annual meeting of the Sanitary Association of Scotland was held at Falkirk on the 14th inst., when several interesting and valuable communications were read.

THE first of a series of eight lectures under the Combe Trust was delivered on the 17th inst. in the Chemical Theatre of the Owens College by Professor Stirling. The subject of the course is the Physiology of Motion.

On the 19th inst., at an inquest held at the Marylebone Court as to the death of Mr. William Holland Baylis, a retired surgeon, evidence was given to the effect that it had been caused by morphia poisoning, and the jury returned a verdict of death from misadventure.

MEDICAL SUPERINTENDENTS' SOCIETY.—The inaugural meeting of the above Society will be held at the Paddington Infirmary, 285, Harrow-road, W., on Wednesday next, the 26th inst. At 3 P.M., Pathological specimens of Joint Disease, and cases of Rheumatism, Hysteria, Rickets, &c., will be shown, after which a paper will be read entitled "Lessons from Infirmary Work."

SPREAD OF LEPROSY.—According to M. Besnier, a member of the French Academy of Medicine, leprosy, far from disappearing by degrees, is spreading rapidly. Since the extension of the French colonial possessions, soldiers, sailors, traders, and missionaries have fallen victims to it in large numbers. M. Besnier, therefore, exhorts physicians in all countries to study the fell disease, in order to find a means of counteracting its ravages, for it has active foci of infection in every part of the globe. The malady is transmitted by a bacillus shaped like that found in tuberculosis. A discussion on M. Besnier's report will shortly take place in the Academy of Medicine.

COLONIAL AID TO UNIVERSITY COLLEGE HOSPITAL.—In response to the appeal from Mr. Berkeley Hill to old University College Hospital men resident abroad on behalf of the rebuilding fund of that institution, a meeting of former students was convened at the Oxford Hotel, Sydney, N.S.W., on June 14th, Dr. P. Sydney Jones in the chair. A subscription was started, the sum of £141 being promised by those in the room, and, according to advices recently received, the total has now reached over £200. Steps are being taken in the sister colonies to inaugurate similar funds, whilst from the interior of West Africa an answer in a tangible form has come to hand, showing that the *alumni*, though scattered, are not unmindful of the benefits conferred by their *alma mater*

LADY DUFFERIN'S FUND.—The donations made in response to Lady Dufferin's special appeal in connexion with the Queen's Jubilee for further assistance to the National Association for Supplying Female Medical Aid to the Women of India, amount to £1700 received from England, and 478,000 rupees subscribed in India.

GLASGOW SOUTHERN MEDICAL SOCIETY.—The annual business meeting of the members of this Society was held on the evening of Thursday, the 13th inst., in their rooms, 11, Bridge-street, when the following office-bearers were appointed for the ensuing session, 1887-88:—President Edward McMillan, L.R.C.S.; vice-president, John Glaister, M.D.; treasurer, T. F. Gilmour, L.R.C.P.; secretary, James Erskine, M.A., M.B.; editorial secretary, R. A. D. Robb, M.B.; seal keeper, James Hamilton, M.B.; court medical, James Morton, M.D. (convener); James Dunlop, M.D.; J. Stuart Nairne, L.F.P.S.; David Tindal, M.D.; David N. Knox, M.A., M.B.; extra councillors, Drs. J. Brown, D. Couper, and J. Johnstone.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—Sir James Paget, Bart., President, took the chair at the quarterly court of directors held on Wednesday, October 12th. The death of one widow in receipt of £40 per annum was announced, and one orphan had ceased to be eligible for further grants. The death of one member was reported. Applications were read from sixty-three widows, five orphans, and three orphans on the Copeland Fund, and it was agreed that a sum of £1370 10*s.* should be distributed among them at the next court. The expenses of the quarter were £52 14*s.* Among the donations received since the last meeting of directors was one of £100 from "Alpha." It was decided that the centenary dinner should be held next year on October 29th, the anniversary of the first meeting of the Society.

TYPHOID FEVER AT CLUNY.—The educational establishment at Cluny, in France, where teachers in secondary schools are trained, has had to be closed, owing to a serious outbreak of typhoid fever. Just before the summer vacation one or two cases occurred, and the administration immediately broke up the college and the school attached to it, and sent the students and boys to their homes. The harm, however, seems to have been already done, as more than 150 of these young men and boys have been suffering from typhoid fever, several having died from it. On investigation, it was found that the foundations of the building were laid in a mass of infective material, and that the drinking-water was all contaminated. Dr. Rodet, of the experimental pathology department, has succeeded in cultivating typhoid bacilli from several samples of the drinking-water.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BONHAM, W. TOPMAN, M.D., has been appointed Honorary Physician to the Mildmay Home for Consumption, Torquay.

BURD, E. LYCETT, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed Second Medical Visitor to the Private Asylums of Salop and Montgomery.

COOMBE, RUSSELL, B.A.Cantab., M.R.C.S., L.R.C.P. Ed., has been appointed House-Surgeon to the Devon and Exeter Hospital, Exeter.

COONEY, JOHN EDWARD, L.R.C.P.Ed., L.F.P.S.Glas., has been appointed Medical Officer for the Second District of the Fulham Union.

FERNIE, EDWARD, M.D. Univ. St. And., M.R.C.S., has been reappointed Medical Officer of Health for the Stone Urban Sanitary District.

FOX, RICHARD J., M.B., C.M.Edin., has been appointed Clinical Assistant to the Birmingham Borough Asylum.

MCGEAGH, JAMES PAUL, M.D., M.Ch.Qu.Univ. Irel., has been appointed Medical Officer for the Rural District of the West Derby Union, vice Fitzpatrick, resigned.

MYERS, ARTHUR T., M.D.Cantab., M.R.C.P., has been appointed Physician to the Belgrave Hospital for Children.

PERN, ALFRED, L.R.C.P.Lond., F.R.C.S. Eng., has been reappointed Medical Officer of Health for the South Stoneham Rural Sanitary District.

SHROFF, D. S. C., L.R.C.P.Ed., L.R.C.S., has been appointed Honorary Surgeon to the Royal Alfred Sailors' Home, Bombay, vice J. M. Barbour, M.B., C.M.Glas., resigned.

WILSON, THOMAS, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer of Health for the Wallesend Urban Sanitary District, vice Aitchison, whose appointment has expired.

WINGRAVE, THOMAS, M.R.C.S., has been appointed Surgeon to the City and East London Dispensary.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum (with an allowance of £30 per annum for cab hire), and furnished rooms, fire, lights, and attendance.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.—Junior House-Surgeon. Salary to commence at £30 per annum, with board, washing, and lodging.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House-Surgeon.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, Sloane-square, S.W.—House-Surgeon and Secretary. Salary £95 per annum, with furnished apartments and an allowance of £20 for coals and candles for the use of the institution.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Registrar and Chloroformist. Salary £30 per annum, with an additional £20 if the post is held for twelve months.

LINCOLN UNITED FRIENDLY SOCIETIES' DISPENSARY.—Resident Medical Officer. Salary £200 per annum, midwifery and vaccination fees, coals and gas, with house free of rates.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Board and lodging in lieu of salary.

NORTH LONDON CONSUMPTION HOSPITAL.—Physician.

OWENS COLLEGE, Manchester.—Bishop Berkeley Fellowships. Value £100 for one year, and renewable for a second year.

ROTHERHAM HOSPITAL.—Assistant to the House-Surgeon. Rooms, commons, and washing, in lieu of salary.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—House-Surgeon. Salary £100 per annum, with board and lodging.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road.—Junior House-Physician. Salary at the rate of £50 per annum, with board and lodging.

ST. THOMAS'S HOSPITAL.—Obstetric Physician.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary at the rate of £50 per annum, with board and lodging.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant Physician.—Assistant House-Surgeon. Board, lodging, and washing, but no salary.

TAUNTON AND SOMERSET HOSPITAL.—House-Surgeon. Commencing salary £100, with board, lodging, and washing in the house.

VESTRY OF ST. MARY, Newington.—Medical Officer of Health. Salary £300 per annum.

WEST KENT GENERAL HOSPITAL, Maidstone.—House-Surgeon. Salary £150 per annum, with furnished apartments, coals, gas, and attendance in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

JACKSON.—On the 11th inst., at Garlenick, Grampound, Cornwall, the wife of Louis Pilkington Jackson, L.R.C.P., of a son.

MORTIMER.—On the 2nd ult., at the Royal Naval Hospital, Hong-Kong, the wife of Deputy Inspector-General B. T. Mortimer, R.N., of a son.

PORTER.—On the 14th inst., at Bow-road, the wife of J. F. Porter, M.D., of a daughter.

PIRRIE.—On the 14th inst., at Radcliffe-gardens, South Kensington, the wife of J. M. Gordon Pirrie, M.D., of a son.

MARRIAGES.

CLARK—WOOD.—On the 13th inst., at St. Martin's Church, Dorking, Arthur W. Clark, L.R.C.P.Lond., M.R.C.S., to Louisa Kate, third daughter of Thos. Wood, of Parsonage House, Dorking.

SMYTH—SUTCLIFFE.—On the 11th inst., at St. David's Church, Naas, Ross V. B. Smyth, M.A., M.D., to Emilie Grace, daughter of J. R. Sutcliffe, Hibernian-bank, Naas.

WHEELER—CHALK.—On the 12th inst., at St. Peter's, Dulwich-common, Albert Wheeler, M.R.C.S., to Mary Laura, only daughter of William Henry Chalk, of Barry-road, East Dulwich.

DEATHS.

EVANS.—On the 17th inst., after a protracted illness, at his residence, Bethune-road, N., Evan Evans, M.D.Lond., Staff-Surgeon, R.N., of Finsbury-pavement, aged 66.

JONES.—On the 1st ult., at Port Fairy, Victoria, Australia, Wm. Jones, M.R.C.S.Eng., youngest son of the late Richard Jones, M.D., of Kidderminster, and formerly Surgeon, 2nd R. N. B. Dragoons (the Scots Greys), in his 75th year.

LEFTWICH.—On the 13th inst., at 12, Grove-road, Highgate-road, N.W., Charles Harcourt Leftwich, M.R.C.S., L.S.A., aged 31.

PYNE.—On the 13th inst., at his residence, Royston, Cambs., Richard Pyne, Esq., M.R.C.S.Eng., J.P. for Cambs., aged 82.

TAYLOR.—On the 16th inst., at Lancaster, Harold Gilbertson Taylor, M.D., Assistant Medical Officer of the Royal Albert Asylum, aged 32.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, October 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Treves: The Diagnosis and Treatment of Chronic Intestinal Obstruction.—Dr. B. W. Richardson: Short Note on Methylal (with a specimen).—Mr. Marmaduke Sheild: A case of Acute Glossitis in a Child, complicated by Trismus.

Tuesday, October 25.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

THE PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. J. F. J. Sykes: General Powers and Duties of Inspectors of Nuisances; Method of Inspection.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. John D. Malcolm: The Condition and Management of the Intestine after Abdominal Section considered in the light of Physiological Facts.—Mr. W. Arbuthnot Lane: (1) On the Mode of Fixation of the Scapula, suggested by a Study of the Movements of that Bone in Extreme Flexion of the Shoulder-joint, and its Bearing upon Fracture of the Coracoid Process; (2) An Undescribed Method by which the Superjacent Weight of the Body is transmitted in a United or Ununited Fracture of the Neck of the Femur through an Acquired Ilio-femoral Articulation, and the Bearing of the Principle involved upon the Surgery of the Hip-joint.

Wednesday, October 26.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M.; Saturday, same hour.

HUNTERIAN SOCIETY.—8 P.M. Dr. Port: On Antipyrin.—Dr. Turner: A case of Purpura.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M.—Specimens will be shown by Mr. Lawson Tait, Dr. Edis, Dr. G. Granville Bantock, and others. Mr. Lawson Tait: Three cases of Intra-peritoneal Hæmorrhage in which the condition was due to Ruptured Tubal Pregnancy successfully dealt with by Ligature of the Broad Ligament.—Dr. Bedford Fenwick: On the Use of Blood-testing in Gynæcological Practice Council at 8 P.M.

Thursday, October 27.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ABERNETHIAN SOCIETY (St. Bartholomew's Hospital).—Mr. Sympson: Hæmatemesis.

Friday, October 28.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

THE PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. J. F. J. Sykes: Nature of Nuisances, including Nuisances the Abatement of which is Difficult.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Sidney Phillips: A case of Stricture of the Bile-duct.—Mr. Barwell: Case of Acute Suppurative Peritonitis (traumatic), Laparotomy and Washing Peritoneum, Recovery.—Dr. Knagge: Case of Tubercular Peritonitis treated by Laparotomy and Washing-out.—Dr. Kilner Clarke: Case of Tubercular Peritonitis cured by Washing-out the Abdominal Cavity with a 1 per cent. Aqueous Solution of Carbolic Acid.

Saturday, October 29.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET Office, October 20th, 1887.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 14	29·85	W.	41	39	...	50	35	·01	Overcast
,, 15	30·04	N.W.	49	37	87	49	35	·05	Bright
,, 16	30·43	N.	47	44	75	52	39	...	Hazy
,, 17	30·63	N.E.	47	45	72	55	43	...	Cloudy
,, 18	30·62	N.W.	45	43	55	53	39	...	Foggy
,, 19	30·52	N.W.	49	45	...	51	44	...	Foggy
,, 20	30·40	W.	46	45	...	...	40	...	Foggy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

BIRDS' INSTINCT REGARDING FRUIT.

THE fruit in Chili and other parts of South America is said to have been this year left entirely untouched by the birds, and to have occasioned the death of both sheep and cattle when given to them in large quantities. These observations are referred to in the *Archivo del Pacifico di Medicina y Cirugia* as tending to show that the instinct of birds with respect to the wholesomeness of fruit is, as Michelet remarks in his work on birds, frequently a worthy guide for human beings to follow. It is possible that the difference in the fruit of different years may have something to do with the etiology of outbreaks of cholera.

J. H.—We have nothing in this country comparable with "Schmidt's Jahrbuch," to which "Braithwaite's Retrospect" is the nearest approach.

Mr. F. C. Wood.—The same qualifications are required as for Poor-law appointments—i.e., a qualification in Medicine and Surgery. Under special circumstances one such qualification is accepted.

Dr. Charteris.—Yes.

LARYNGISMUS STRIDULUS.

To the Editors of THE LANCET.

SIRS,—In the kindly notice of my paper, reprinted from the "Archivio de Patologia Infantile" of Naples, "Sul Laryngismo Stridulo," &c., in yesterday's issue, your reviewer says: "We notice that cod-liver oil is not mentioned, which in our opinion should be the practitioner's sheet anchor." Now, here he has evidently overlooked the remarks on page 17 of the paper: "L'olio di fegato di merluzzo a dosi non troppe alte può essere dato; bisogna esaminere le feci, giacchè se l'olio appare galleggiante sopra la superficie, la dose dourebbe essere ridotta." Had I, indeed, omitted to mention so valuable an agent in the treatment of these cases, I should have been unworthy of any favourable notice; but, in fact, I not only acknowledged its value, but agree almost entirely with your reviewer's estimate, and I also called attention to a very important point in the precaution necessary during its exhibition of watching the stools; for a long experience has convinced me that, in the majority of children's cases in which this oil is given, a large proportion passes unchanged through the bowels, and is not merely useless, but positively injurious by its relaxing effect. The true plan is to reduce the dose until the oil is no longer visible on the motions.

I trust that, when your reviewer's attention has been called to this, he will withdraw the stricture.

I am, Sirs, yours very truly,

Manchester, Oct. 16th, 1887. W. H. BARLOW, M.D.

WILSON FOX MEMORIAL PORTRAIT FUND.

Third List of Subscriptions.

	£	s.	d.
Sir Julian Goldsmid, Bt.	10	10	0
Sir E. Baggallay ...	10	10	0
J. E. Erichsen, Esq., Pres. of Univ. Coll. (second donation) ...	10	10	0
Sir Andrew Clark, Bt. ...	5	5	0
Sir R. Nicholson, Bt. ...	5	5	0
Dr. Cumberbatch ...	5	5	0
Prof. W. H. Draper, New York	5	5	0
Dr. Hare	5	5	0
Sir C. Mills, Bt.	3	3	0
Dr. Broadbent	3	3	0
T. Hodgkin, Esq.... ...	3	3	0
Lord Justice Fry... ...	2	2	0
Dr. Radcliffe Crocker ...	2	2	0
Rev. H. R. Reynolds, D.D	2	2	0
Prof. Burdon-Sanderson	2	2	0
Prof. Schafer	2	2	0
H. Smith, Esq.	2	2	0
Dr. Protheroe Smith ...	2	2	0
Dr. Allen Sturge... ...	2	2	0
P. Tuckett, Esq.	2	2	0
Colonel Aston	2	0	0
*Dr. C. J. Arkle	1	1	0
H. Farnell, Esq., Eastbourne	1	1	0
Dr. Lloyd Birkett ...	1	1	0
*Dr. W. McB. Ellis ...	1	1	0
Dr. Fincham	1	1	0
Dr. W. B. Houghton, St. Leonard's	1	1	0
Dr. Huxley, Torquay ...	1	1	0
*C. W. Jecks, Esq. ...	1	1	0
Dr. S. Mackenzie ...	1	1	0
Dr. G. E. Moore	1	1	0
*W. P. May, Esq.... ...	1	1	0
Dr. Paramore	1	1	0
*Dr. W. Pasteur	1	1	0
Dr. Pye-Smith	1	1	0
Dr. Rayne	1	1	0
T. Lawrence Read, Esq...	1	1	0
W. H. O. Sankey, Esq. ...	1	1	0
Dr. Davies Thomas, Adelaide	1	1	0
J. Thompson, Esq., Nettingham	1	1	0
W. P. Thornton, Esq. ...	1	1	0
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The Misses Aston... ...	1	0	0
Mrs. J. Birch	1	0	0

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T. BARLOW, M.D., 10, Wimpole-street, W. R. GOWERS, M.D., 50, Queen Anne-street, } Hon. Secs.

SWALLOWING A COIN.

To the Editors of THE LANCET.

SIRS,—On reading the note on the above subject by "H. F. S." in your last issue I thought the following might be of interest.

A female child, aged three years, on Dec. 15th, 1885, swallowed two farthings. The next day the patient could only swallow small quantities of food at once, and that with pain, fluids causing more difficulty than solids. The mother was of opinion that one of the coins had stuck in the child's throat; but nothing could be detected, any laryngoscopic inspection being impossible, owing to the great fright of the little patient. Air entered freely into both lungs, but with each inspiration was heard a wheezy sound, more marked when asleep, and still more so when excited. These symptoms persisted, the child could take but little food, became pale and thin, and developed a cough. There were still no physical signs in the lungs, and nothing could at any time be felt externally. On Jan. 26th, 1886, the farthing passed per anum, and all symptoms ceased. The other farthing caused no inconvenience, but was not passed per anum till nearly five months after being swallowed—viz., on May 7th, 1886.—I am, Sirs, yours truly,

J. LANGTON HEWER, M.D., F.R.C.S. Eng.

Brownswood-park, N., Oct. 15th, 1887.

To the Editors of THE LANCET.

SIRS,—I had a similar case to that recorded by "H. F. S." in your last issue, which may interest him and other readers.

I was called on July 2nd of this year to a little girl, aged four years, who had swallowed a new bronze halfpenny. Purgatives were forbidden, and a dry diet prescribed. The bowels acted regularly once a day until July 11th, when the coin was evacuated, locked up in a mass of hard fæces. Thus it took only two days longer to pass than in the case reported by your correspondent. The coin was coated quite black with cupric sulphide. As it was a nearly new bronze one, I obtained another of the same date, and found that the one which had been swallowed weighed a grain and a half less than the other. Of course, the loss of weight goes for very little, as the one may have been slightly more worn than the other; but, as I have observed, they were both new. The child suffered no inconvenience.

I am, Sirs, yours truly,

Oct. 17th, 1887. L.R.C.P.

WELL-TO-DO MEMBERS OF FRIENDLY SOCIETIES AND MEDICAL ATTENDANCE.

Dr. Alderson.—We are not sorry that this question has been raised in a leading lodge, where the members and the medical officer understand and respect each other, as in this case; and we shall look with interest to the result of their meeting, and with some confidence that it will be good and worthy of the interests concerned.

Rev. Walter Wilcox.—We hope shortly to give some information about the various services and posts which are open to medical men. Our correspondent will find a great deal of valuable information in Dr. Diver's little work, "The Young Doctor's Future" (Smith, Elder, and Co.); also in the introductory pages of the Medical Directory (Churchill).

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—A slight inaccuracy occurs in your report of my case in your last issue, page 759, though it is hardly perhaps worth noticing. The patient was not seen on July 11th by Mr. Fawsitt as reported, but by myself. I was on a visit to Oldham at the time, and naturally took the opportunity of seeing the boy again.

I am, Sirs, yours faithfully,

Southport, Oct. 18th, 1887. JOHN J. WEAVER (late House-Surgeon).

A BELGIAN MEDICAL AID SOCIETY.

A CORRESPONDENT of a Belgian medical journal complains that a society which calls itself "La Santé" is attempting to obtain medical services for its members for a very inadequate sum. This society appears to correspond to several benefit and insurance societies possessing a medical aid branch which exist and flourish in this country, and against which, as long as they confine their operations to the poor, there is nothing to be said. The tariff of "La Santé" is as follows:—Medical attendance, 3 fr.; confinements, 5 fr.; medicines (from a pharmacist), 4 fr. There would appear to be no restrictions as to the class of persons who may join "La Santé." Notwithstanding the poor rate of remuneration, the prospectus, which seems to have been largely advertised, claims that it has on its staff the *best* doctors, dentists, and pharmacists!

Mr. A. V. Dyer.—Quinine is well known as a uterine stimulant.

FIRES IN THEATRES.

To the Editors of THE LANCET.

SIRS,—"Practice makes perfect"; and the converse is true—nothing can be done well without practice. We initiate our soldiers and sailors into the art of war by sham fights, and why should we not learn to deal with conflagrations in theatres by rehearsing sham fires? If that were done to-night at almost any theatre in the kingdom, I doubt not that we should find that the gas, the escape of which from melting pipes is the real source of danger and sole cause of rapid destruction, could not be turned off at the main; that candles, which ought to light the corridors, so as to obviate darkness and consequent panic when the gas was turned off, were conspicuous by their absence; that the special doors of exit in case of fire were rusted up and could not be opened, or that the man in charge had gone to the seaside with the key in his pocket; that the iron screw intended to shut off the stage from the auditorium would not work; that the fire hose on the stage was useless, and the extincteurs all dried up. It has been so, and will be so until care is taken from day to day to see that everything is in order, so that it may be used on the instant should danger arise. Let the proprietors of theatres announce the rehearsal of sham fires at the close of a performance, invite spectators, or charge, if they please, for admission. Let them show that whatever happened they were prepared to fight the terrible demon the moment he appeared, and that, win or lose in the encounter, there would always be time for the audience to clear out without those ugly rushes which have caused so many deaths. Let the public feel convinced that those who are responsible for such matters had everything in readiness, and were prepared to meet any emergency; that the right men were in the right place, and ready when wanted; that the blazing stage can be instantly shut off from the body of the theatre by an iron screen; above all, that the gas could be turned off in a moment without involving absolute darkness, and we can go to the theatre in comfort, well assured that no harm can come to us, except from our own folly if we join in a senseless stampede for the exit—a stampede which would not occur if the public felt and were thus taught they could sit still or file out in order without running the risk of suffocation or roasting alive. I am, Sirs, your obedient servant,

Oct. 17th, 1887. C. B. T.

P.S.—The volume of gas in a theatre is enormous. I see a recent writer to the *Spectator* states that he has seen a small gas-pipe spring 10 ft., a column of flame which ignited an inch plank in twenty seconds. It was the flames mixed with volumes of escaping and ignited coal-gas which reached the gallery in the Exeter Theatre within five minutes. All theatres should be directly connected with the fire brigades, so that no time may be lost in summoning help; and a couple of baths filled with water placed at the sides, so that if an actress's dress caught fire she could jump in at once. The fire rehearsals should take place once a week, and insurance offices refuse to have anything to do with any theatre in which this was not done.

"CORONERS' INQUESTS."

To the Editors of THE LANCET.

SIRS,—Mr. Gray's experience of coroners' inquests is surpassed by my own. In my last three cases no medical evidence whatever was given, and no post-mortem examination held. The coroner and his twelve jurymen decided in each case that deceased had died from "natural causes." I fancy most medical men would characterise such a decision as rash—if they wished to put it mildly. The first case was that of a young man who, after working in his garden and subsequently playing cards at his club, complained for the first time of illness (headache), started for home, and fell down and died almost immediately; no medical man saw him before death. He was a strong, healthy man twenty-one years of age, and was not suspected of disease. In the second case a middle-aged man left the harvest field, saying he did not feel well, went home, locked himself in his bedroom, and was found dead later. The third case was that of an old man who complained of cramping pains in the body, left his work, was ill all night, and died next morning without medical attendance. The only thing that exercises my curiosity is why coroners require a jury at all, and why they go through the solemn farce and mockery of an inquest when they exclude the only evidence that can decide the question.

I am, Sirs, yours obediently,

Oct. 6th, 1887. COUNTRY DOCTOR.

HELP FOR UNSUCCESSFUL MEDICAL MEN.

An Old Correspondent wishes us to advocate a scheme or institution for the relief of assistants or others who have not been able to save or lay by anything. He observes that the wealth of Sir Erasmus Wilson and Mr. Quain was not left for this purpose. We must remind him that there is an excellent institution in London for the relief of orphans and widows of medical men, and that it is, strangely, unsupported by many men to whose families such a provision would be an unspeakable comfort. Self-help and providence are indispensable in our profession, as in all others.

L.R.C.P. Lond.—If our correspondent is thoroughly acquainted with either German or Latin, he may try almost any German university. If not, he may write to the Dean of the Medical Faculty of the University of Erlangen, where, we believe, an interpreter may be permitted. The University of Liège might perhaps admit an English medical man. Its requirements are much the same as those of Brussels. We cannot say whether an interpreter is allowed. The Dutch university of Arnheim permits its examination for M.D. to be conducted in English. It should be remarked that there is no reason to expect that the examination in any of these cases will be easier than in Brussels.

Interrrogans.—Jeffrey Bell's book in Cassell's series.

"CATARACT OPERATIONS."

To the Editors of THE LANCET.

SIRS,—In your issue of last week a correspondent, "Sapo Mollis," asks for the "usual percentage of success in cataract operations." To answer this question it is necessary to know what is meant by "success"; for it might be applied to all those cases in which the eye is not lost from panophthalmitis following on the operation, or to those cases in which vision is improved in any degree, however small, on what it was previously; or the word "success" may be retained for a still higher standard, and only used for cases in which the patient is enabled to read and write. Dr. C. Schweigger, writing on this point in the "Archives of Ophthalmology," vol. xvi., No. 3, in a paper entitled "The Operations for Primary and Secondary Cataracts," which has been translated by Dr. Cornelius Williams, says: "V. Graefe was accustomed to reckon as a perfect result a case in which V. = $\frac{1}{10}$. This I do not think quite justifiable, since V. $\frac{1}{10}$ is not sufficient for reading and writing;" and he goes on to say that he takes as his standard of success.

"Sapo Mollis" next asks for "the percentage of success from the hands of all operators in the Moorfields Eye Hospital for the last five years." I have only had time to collect the figures for the last four years; they are as follows: Of unselected cases of extraction of senile cataract, in nearly all of which a modified Graefe's operation was performed, there were: In 1883, 225 cases, of which 14 suppurated; in 1884, 241 cases, of which 8 suppurated; in 1885, 264 cases, of which 3 suppurated; in 1886, 285 cases, of which 7 suppurated—making a total of 1015 cases and 32 suppurations, or 3·15 per cent. If, however, only the last three years be taken, the percentage is much lower; from 1884 to 1886 inclusive, there were 790 cases, of which 18 suppurated, or 2·28 per cent.

To obtain the percentage of cases that obtain useful vision is practically impossible, as so many eyes are lost from different causes after patients leave the hospital. Thus a case that has lost vitreous and been discharged with fair vision, may a few weeks later get a detachment of the retina, or floating opacities in the vitreous, which renders it practically a lost eye; or, again, a case followed by an attack of iritis which has quieted down may have it again lighted up on leaving the hospital, and end in a closed pupil. I certainly think that a percentage of seventy-four that can read and write is a fair average, and not much below that obtained at Moorfields.—I am, Sirs, yours faithfully,

E. TREACHER COLLINS,
Senior House Surgeon, Royal London Ophthalmic
October, 1887. Hospital, Moorfields.

SYPHILIS IN BOSNIA AND THE HERZEGOVINA.

DR. GLÜCK mentions, in a report on syphilis in Bosnia and the Herzegovina, published in the *Przegląd Lekarski*, that hereditary syphilis is very common among the rural population of these provinces, and that it is treated in a very heroic and improper manner. Two chief forms of treatment are commonly practised—the "mild," which consists of making the persons affected smoke cinnabar (sulphide of mercury), and the "strong," which implies the administration by the mouth of mercurial pills. By the way, smoking cinnabar is a well-known remedy amongst Indian hakims for syphilitic ulceration.

New York.—In reply to a query as to practice in the State of New York, we would say that a diploma must be obtained from some medical college in that State. Our correspondent may with advantage refer to Wooton and Winslow's Guide to the Medical Profession (Upcott Gill), or he may write to the Dean of the College of Physicians and Surgeons, New York, who will doubtless inform him of the terms on which an English medical man can be admitted to examination. Most of the other States accept British qualifications.

Mr. F. Treves.—Yes.

ABUSE OF HOSPITALS BY THE WELL-OFF.

A CORRESPONDENT of the *Bristol Times* asserts, on the authority "of one of the surgeons," that actually one of the Judges lately underwent treatment at one of the great London hospitals, and was cured there, but made no present to the institution. We are slightly incredulous on this subject, though it cannot be denied that in every rank of society there is a strange willingness to get medicine for nothing, or on shabby terms.

M.B. has not enclosed his card.

A CAUTION TO SECRETARIES AND CLERKS OF HOSPITALS AND OTHER CHARITIES.

To the Editors of THE LANCET.

SIRS,—Will you allow me to warn my colleagues against a man who is now calling at hospitals &c., stating that he has been sent by the editor of a well-known "daily" for a couple of reports which the editor wishes to send to two benevolent persons, whom he names, and who are desirous of making donations. After this plausible opening he asks for further papers for similar purposes, which he assures his interlocutor will be most judiciously used by the editor, and having thus increased the interest already aroused, he asks the small sum necessary for postage. The man is fair, between thirty and forty years of age, and, when I saw him, with a beard and moustache.

I am, Sirs, yours faithfully,

Oct. 18th, 1887. A HOSPITAL SECRETARY.

*** We have received a letter to the same effect from the Lady Superintendent of the Hospital for Women and Children, Lupus-street, S.W.—ED. L.

SWALLOWING SPECTACLE GLASSES.

To the Editors of THE LANCET.

SIRS,—With reference to the note in your last week's issue by "H. F. S.," headed "Swallowing a Coin," the following may appear interesting.

A male lunatic swallowed both glasses of an ordinary pair of spectacles at 2 P.M. on Friday, the 14th inst. They were passed together about 8 A.M. on Sunday, the 16th—i.e., forty-two hours afterwards. No inconvenience resulted. Treatment consisted in the liberal administration of puddings made of farinaceous food. I am, Sirs, yours faithfully,

Oct. 18th, 1887. J. B.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Marshall, London; Dr. W. H. Barlow, Manchester; Sir Wm. Roberts; Sir James Paget, London; Dr. A. H. Sansom, London; Dr. J. H. Jones, Wilkes Barré; Dr. T. D. Savill, London; Dr. J. L. Hewer; Dr. Danford Thomas, London; Dr. Alfred Carpenter, Croydon; Mr. Lawson Tait, Birmingham; Mr. Allen, Grimsby; Mr. Bland Sutton; Dr. Gordon Holmes, London; Mr. Laslett, Farnworth; Mr. J. R. Buchanan, Glasgow; Mrs. A. B. Rees, London; Mr. T. F. Gosling, Worcester; Mr. J. J. Weaver, Newcastle; Dr. Bagshawe, St. Leonards; Dr. Leith Napier, London; Dr. F. P. Atkinson, London; Messrs. Fitzroy and Co., Liverpool; Dr. Mears, Newcastle-on-Tyne; Mr. Ledgard, Kirkby Lonsdale; Mr. Papillon, Grantham; Mr. F. C. Wood; Messrs. Sutton and Son, Reading; Mr. C. J. Wright, Leeds; Messrs. Burroughs and Wellcome, London; Mr. E. T. Collins, London; Messrs. Mottershead and Co., Manchester; Mr. Green, Ballycarney; Messrs. Street and Co., London; Dr. Duboué, Paris; Dr. Turner, London; Mr. Morton Smale, London; Dr. Sainsbury, London; Messrs Rocke, Tompsitt, and Co.; Mr. Harrison, Willowmere; Dr. Tomkins, Leicester; Mr. Munro Scott, London; Mr. A. Pierson, Baloochistan; Messrs. Wright and Co., Bristol; Messrs. Southall Brothers, Leeds; Messrs. Burgoyne and Co., London; Herr A. Saxlehner, Buda Pesth; Dr. Z. H. Evans, Bay City; Dr. R. Batt, London; Dr. T. Oliver; Messrs. Johnson and Co., Lancaster; Dr. J. Finlayson, Glasgow; Messrs. Reynell and Son, London; Dr. Percival Hunt, Gravesend; Messrs. Smith and Son, Manchester; Mr. C. W. Cathcart, Edinburgh; Messrs. Beal and Sons, Brighton; Mr. C. E. Jennings, London; Messrs. Ruser and Son, Dublin; Dr. J. Phillips, London; Dr. Young; Dr. Grange, Old Cumnock; Mr. Blackett, London; Mr. H. D. Buss; Mr. Trent, New York; Mr. H. Godrich, London; Mr. W. Brown, Leeds; Mr. J. H. Walters, Reading; Dr. V. D. Harris, London; Mr. C. R. Abbott, Braintree; Messrs. Shaw, Grantham; Dr. Milburn, Hull; Mr. Crespi, Wimborne; Dr. W. Pasteur, London; Dr. Erskine, Glasgow; Mr. A. Benthall, Southsea; Dr. McVail, Kilmarnock; Surgeon-Major Colson, Aden; Dr. Wise, London; Miss Moorhouse, Loadon; Mr. St. Dalmas, Leicester; Dr. Dukes, Rugby; Mr. Mayor, Weybridge; Mr. Browne, London; Dr. Steele, Florence; Mr. Turner, Bristol; Messrs. Letts and Co., London; Major Terry, Winchester; Messrs. Rannreuther and Co., Birmingham; Miss Taylor, Hartlebury; Messrs. Livingstone and Co., Edinburgh; Mr. Somers, Birmingham; Messrs. Rothersall and Co., Manchester; Mr. Hoops, Ravensbourne; Messrs. Reynolds and Co., Leeds; Mr. Tratman, Clifton; Mr. Watt, London; Messrs. Pocock and Co., London; Messrs. Ratcliff, Liverpool; Messrs. Maythorn and Son, Biggleswade; Dr. Walford, Ramsgate; Mr. Hawkins, London; Miss Carnie, Chelsea; Mrs. Evans, Stockport; Mr. Tell, Kentish-town; Dr. Waters, Liverpool; Mr. Carnie, Aberdeen; Mr. Patterson, Leeds; Dr. Stanley, Edinburgh; Mr. Freeman, London; Mr. A. J. C. Mitchell, Bonita, U.S.A.; Mr. Barren, Manchester; Mr. Hornibrook, London; Mr. Bennett, Rugby; Surgeon-General Stewart, Lymington; Mr. J. S. Walker, Hanley; Artist, Barron-green; Interrogans; J. B.; Surgeon-Major, Medical Staff; L.R.C.P. Lond.; A Naval Staff Surgeon; A Hospital Secretary; The Director-General of the Army Medical Department; L.R.C.P.; M.B.; R. R.; Music; Superintendent, Clerkenwell; Matron, Royal Infirmary, Bristol; M.D.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Mackay, Esk; Mr. Balding, Royston; Mr. Hardy, Maidstone; Messrs. A. and J. Shaw, Grantham; Mr. Giddie, Scarborough; Messrs. Johnston and Co., Manchester; Mrs. Larmonth, Kentish-town; Mr. Turner, High Wycombe; Mr. Coo, Leeds; Mr. Moore, Silloth; Mr. Davies, New Quay; Dr. Chutison, Blackburn; Mr. Abbot, Sheffield; Mr. Nicholls, Hartest; Mrs. Nicolay, Newport; Mr. Byrt, Bristol; Dr. Maturin, Winchfield; Mr. Bigg, London; Miss Taylor, Clifton; Miss Pincoff, Folkestone; Mr. Williams, Sunderland; Mr. Marth, Skelmersdale; Mr. Scott, Manchester; Mr. Wardley, Buxton; Mr. Adam Hampstead; Messrs. Bramley, Lisbon; Mr. Halstead, Arundel; M Smith, Glasgow; Dr. Higginson, Bengal; Mr. Macadam; Mrs. Cunningham, Surbiton; Mr. Coleman, Cardiff; Mr. Grainger; Mr. Pitcher, Stoke Newington; Mr. Booth, Greenwich; Dr. Osborne, Bournemouth; Mr. Davis, Worcester; Mr. Wormald, Manchester; Mr. Lister, Birmingham; Dr. Ritchie, Oxley; Mr. Brayne, Balham; Mr. Pettinger, Manchester; Mr. Robertson, Grays; Dr. Liveing, London; Mr. Drake, London; Dr. Harding, Whittlesea; Mr. Crassweller; Messrs. Milner, Lancaster; Mrs. Barker, London; Chirurgus; J. N., South Kensington; M.D., Leamington; X. Y.; X. N., London; A. B., Leicester; Alpha, Liverpool; Cantab., Burton-on-Trent; Medicus, Cardiff; Dr. Y. Z., Manchester; K. K.; H.; Lux; M.D., Liverpool; P. S.; Surgeon, Buckfastleigh; Secretary, Westminster; Beta; A. R. B., Surbiton; M.D., Birmingham; W. T. R.; Fides, Creston-park; X. Y. Z., Shepherd's-bush; Medicus, Reading; M.D., Crewe; C. H., Cranleigh; R. R. A., London; M. M., Bradford; P. R.; A. R.; B. S. Lichfield; O. M., Peckham; S. K., Grays; A. H., Leeds.

Hastings and St. Leonards News, Newcastle Chronicle, Malta Standard, &c., have been received.

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